OFFICE OF VOCATIONAL EDUCATION AND WORKFORCE DEVELOPMENT

Approval to begin the Administrative Procedures Act process: to revise *The Mississippi Secondary and Postsecondary Curriculum Frameworks*

EXECUTIVE SUMMARY

The Mississippi Secondary and Postsecondary Curriculum Frameworks are revised on a four to five-year cycle. Each curriculum framework follows the established format for secondary or postsecondary vocational and technical programs.

Draft curricula for each program were revised and reviewed with input from local district personnel and business/industry collaborators. Approved secondary and postsecondary curricula will be disseminated for implementation in the 2008-2009 school years. Postsecondary curricula must be implemented by July 1, 2009.

The following secondary and postsecondary curriculum frameworks are recommended for approval:

Secondary Programs

- Family and Consumer Sciences and Related Technology

Postsecondary Programs

- Automotive Vehicles and Accessories Marketing Operations
- Business and Marketing Management and Related Technology
- Food Production and Management Technology
- Irrigation Management Technology
- Massage Therapy
- Pharmacy Technology
- Pipefitter/Steamfitter
- Plumbing Technology
- Practical Nursing
- Process Operations Technology
- Sheet Metal Technology

The *Executive Summary-Secondary Curricula Frameworks* contains the following elements for each revised secondary curricula:

- ❖ Program Description
- ❖ CIP Code and CIP Name
- ❖ Course Outline

❖ Curriculum Framework
  >Student Competencies
  >Suggested Student Objectives

The *Executive Summary-Postsecondary Curricula Frameworks* contains the following elements for each revised postsecondary curricula:

❖ Program Description
❖ Suggested Course Sequence
❖ Listing of Courses
  >Course Name
  >Course Abbreviation
  >Classification
  >Description (including recommended number of lecture and lab contact hours)
  >Pre/Corequisites

All curricula frameworks are designed to provide local programs with a foundation that can be used to develop localized instructional management plans and course syllabi. Contents of each framework are not designed to limit the content of a course, but to provide a minimum baseline of instruction, which all programs must meet. Teachers, administrators, and instructional management personnel are encouraged to expand and enhance the statewide frameworks to better meet the needs of their students.

Backup Material attached.

Recommendation: Approval

NOTE: The Office of Vocational Education and Workforce Development have provided printed, bound executive summaries for the curriculum frameworks. The completed documents are available upon request.

DESCRIPTOR TERM:	CODE:
Curriculum Guides	**8701**

ADOPTION DATE:	REVISION:
January 15, 1999	

STATE BOARD POLICY

The Mississippi Department of Education will provide curriculum frameworks to set forth expectations of students by specifying course titles and content. A schedule for revision of the frameworks will be established. As subject areas are revised and approved by the State Board of Education, the modifications will be disseminated to the appropriate individuals in the educational community. For an up-to-date copy of each framework go to http://cia.rcu.msstate.edu/curriculum/validation.asp. A schedule for revision shall be kept on file in the Mississippi Department of Education .

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MISSISSIPPI CURRICULUM FRAMEWORKS FOR VOCATIONAL-TECHNICAL PROGRAMS

SECONDARY
EXECUTIVE SUMMARY

REVISED IN 2007-2008

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Foreword

Secondary vocational-technical education programs in Mississippi are faced with many challenges resulting from sweeping educational reforms at the national and state levels. Schools and teachers are increasingly being held accountable for providing true learning activities to every student in the classroom. This accountability is measured through increased requirements for mastery and attainment of competency as documented through both formative and summative assessments.

The courses in this document reflect the statutory requirements as found in Section 37-3-49, Mississippi Code of 1972, as amended (Section 37-3-46). In addition, this curriculum reflects guidelines imposed by federal and state mandates (Laws, 1988, ch. 487, §14; Laws, 1991, ch. 423, §1; Laws, 1992, ch. 519, §4 eff. from and after July 1, 1992; Carl D. Perkins Vocational Education Act III, 1998; and No Child Left Behind Act of 2001).

Each secondary vocational-technical course consists of a series of instructional units which focus on a common theme. All units have been written using a common format which includes the following components:

- Unit Number and Title
- Suggested Time on Task - An estimated number of clock hours of instruction that should be required to teach the competencies and objectives of the unit. A minimum of 140 hours of instruction is required for each Carnegie unit credit. The curriculum framework should account for approximately 75-80 percent of the time in the course.
- Competencies and Suggested Objectives
  - A competency represents a general concept or performance that students are expected to master as a requirement for satisfactorily completing a unit. Students will be expected to receive instruction on all competencies.
  - The suggested objectives represent the enabling and supporting knowledge and performances that will indicate mastery of the competency at the course level.
- Suggested Teaching Strategies - This section of each unit indicates strategies that can be used to enable students to master each competency. Emphasis has been placed on strategies which reflect active learning methodologies. Teachers should feel free to modify or enhance these suggestions based on needs of their students and resources available in order to provide optimum learning experiences for their students.
- Suggested Assessment Strategies - This section indicates strategies that can be used to measure student mastery. Examples of suggested strategies could include rubrics, class participation, reflection, and journaling. Again, teachers should feel free to modify or enhance these suggested assessment strategies based on local needs and resources.

- Integrated Academic Topics, Workplace Skills, Technology Standards, and Occupational Standards - This section identifies related academic topics as required in the Subject Area Assessment Program (SATP) in Algebra I, Biology I, English II, and U. S. History from 1877, which are integrated into the content of the unit. It also identifies the 21st Century Skills, which were developed by the Partnership for 21st Century Skills, a group of business and education organizations concerned about the gap between the knowledge and skills learned in school and those needed in communities and the workplace. A portion of the 21st Century Skills addresses learning skills needed in the 21st century, including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills. The need for these types of skills have been recognized for some time and the 21st Century Skills are adapted in part from the 1991 report from the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). Another important aspect of learning and working in the 21st century involves technology skills, and the International Society for Technology in Education, developers of the National Education Technology Standards (NETS), were strategic partners in the Partnership for 21st Century Skills.
- References - A list of suggested references is provided for each unit. The list includes some of the primary instructional resources that may be used to teach the competencies and suggested objectives. Again, these resources are suggested and the list may be modified or enhanced based on needs and abilities of students and on available resources.

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FAMILY AND CONSUMER SCIENCE AND RELATED TECHNOLOGY

Program Description
Family and Consumer Sciences

Family and Consumer Sciences (FCS) education in Mississippi consists of the CORE program and specific occupational programs. The CORE program prepares students for living in the real world and helps them develop leadership, problem-solving, decision-making, critical thinking, communication, computer, and mathematical skills. The specific occupational programs focus on career exploration and gaining the skills in a specific profession for entry level employment or continuation of education. FCS education enhances the leadership potential and essential life skills of its students and encourages life-long learning.

Family and Consumer Sciences education offers pathways in the following areas:
- CORE Program
  - Family Dynamics
  - Family and Individual Health
  - Child Development
  - Nutrition and Wellness
  - Personal Development
  - Resource Management
- Occupational Pathways
  - Culinary Arts
  - Early Childhood
  - Hospitality

Skill standards referenced are from the *American Association of Family and Consumer Sciences, VTECS, and the National Health Education Standards.*

Course Outline

Family Dynamics
Course CIP Code: 20.0121

Course Description: Family Dynamics is a course which develops skills related to personal, family, and social issues. It includes instruction in dimensions of adolescent development, family decisions and responsibilities, social decisions and responsibilities, and management of family systems in today's society. (Grade 9-10-11-12, 1 Semester, .5 Carnegie Unit)

Unit	Title	Hours
1	Dimensions of Adolescent Development	7
2	Family Decisions and Responsibilities	27
3	Management of Family Systems	30

Course Name: Family Dynamics I
Course CIP Code: 20.0121

1. Understand growth and change during the teen years.
   a. Describe growth and change in the muscular, skeletal, and endocrine system which occurs at puberty.
   b. Describe the needs which must be met for healthy emotional development.
   c. Explain the role of genetics and environment in shaping the personality and compare personality types.
   d. Describe ways of relating to and communicating effectively with others.
2. Explain the importance of developing a positive self-esteem.
   a. Describe how self-esteem influences and enhances behavior.
   b. List ways to improve self-esteem.
3. Examine one's own potential for career development.
   a. Recognize one's own personality traits as related to career interest and development.
   b. Design goals and strategies for reaching one's potential.
4. Determine choices involved in establishing a lifestyle.
   a. Analyze the impact of physical and social decisions on lifestyles to include dating behaviors.
5. Develop an understanding of the role of dating.
   a. Identify the purposes of dating.
   b. Explore patterns in a dating relationship.
   c. Discuss challenges associated with dating.
   d. Practice interpersonal skills related to dating.
   e. Explore the advantages of delayed dating and living single.
6. Develop an understanding of love and commitment.
   a. Explore the concept of love.
   b. Discuss misconceptions regarding love and marriage.
   c. Identify factors to consider in selecting a marriage partner.
   d. Identify factors that contribute to a successful marriage.
   e. Practice decision-making skills needed in a marital relationship related to topics such as budget, recreation, housing, other friends, children, etc.
7. Evaluate steps to building a marriage.
   a. Explain how the choice of a marriage partner affects one's life.
   b. Identify issues which should be discussed before marriage.
   c. Determine factors which contribute to a successful marriage.
8. Recognize the demands of responsible parenting.
   a. Analyze factors indicating readiness for parenting to include physical, social, emotional, financial, and legal responsibilities.
   b. Assess the impact of pregnancy on life goals.
9. Evaluate the dynamics involved in preserving the family as a unit.
   a. Describe the family system.
   b. Explain the functions of a family to include nurturing, economic, social, and intellectual support.
   c. Analyze factors that make strong families including commitment, communication, and decision-making.
   d. Relate the use of conflict resolution in the prevention of family violence.

    e. Describe a family support system and its value.
10. Develop coping techniques for individuals dealing with crisis in the family.
    a. Define the types of crisis that families face.
    b. Locate resources that assist individuals and families in crisis situations.
    c. Identify appropriate solutions for individuals in family crises.
11. Explore the aspects of domestic violence.
    a. Identify types of domestic violence.
    b. Discuss warning signs of violence.
    c. Identify preventive measures and intervention skills.
    d. Practice intervention skills.
12. Utilize resources and technology in managing multiple roles of family members.
    a. Evaluate resources available to families which enhance the overall quality of family life.
    b. Assess the use of technology in the management of multiple roles of different family members.
13. Analyze factors of balancing work and family.
    a. Describe two kinds of work that families do.
    b. Explain how attitudes about who does the work in a family have changed over the years.
    c. Summarize ways in which jobs affect family life and vice versa.
14. Discuss career options working with human service occupations.
    a. Identify and/or research related human services job opportunities.

Family and Individual Health
Course CIP Code: 20.9126

Course Description: Family and Individual Health is a course which develops skills related to personal, social, and mental health in today's society. It includes instruction on human growth and development, disease prevention and control, substance abuse and prevention, community and environmental health, and safety and first aid. This course can be taken in lieu of Comprehensive Health. (Grades 9-10-11-12; 1 Semester, .5 Carnegie Unit)

Unit	Title	Hours
1	Personal and Consumer Health	6
2	Mental Health	7
3	Social Health	5
4	Human Growth and Development	10
5	Disease Prevention and Control	10
6	Nutrition and Fitness	10
7	Substance Abuse Prevention	7
8	Community and Environment Health	5
9	Safety and First Aid	10

Course Name: Family and Individual Health
Course CIP Code: 20.9126

1. Describe ways to achieve and maintain a healthy lifestyle.
   a. Define health and list characteristics of a healthy person.
   b. State good personal hygiene habits to include dental, skin, hair, ear, eye, and nail care.
2. Explain the relationship between current health decisions and future wellness.
   a. Identify the steps in the decision-making model.
   b. Apply the decision-making model to solve a personal problem.
3. Recognize the benefits of being a wise consumer.
   a. Identify rights and responsibilities as a consumer.
   b. Identify popular types of deceptive advertising and product fraud.
   c. Recognize medical quackery in the marketplace.
   d. Examine ways for paying for health care services.
4. Explain how mental health contributes to personality.
   a. Explain how an individual's mental and physical health habits affect what he/she thinks about himself/herself.
   b. Identify non-threatening ways of being assertive.
5. Describe how stress influences mental health.
   a. Identify situations that cause stress and explain the body's response.
   b. Develop a stress management plan.
6. Define functional and organic mental disorders and state controls for each.
   a. Identify signs of mental health problems.
   b. Identify ways to treat mental disorders.
   c. Identify warning signs of suicide and demonstrate intervention strategies.
   d. Discuss eating disorders such as anorexia, nervosa, and bulimia.
7. Describe how the skills of communication and cooperation are essential for healthy relationships.
   a. Identify strategies for choosing abstinence when faced with sexual pressures.
   b. Identify qualities that are important in close friends.
8. Describe why the family is the basic social unit of society.
   a. Describe elements that healthy families have in common and ways to maintain family health.
   b. Explain factors that may cause a family system to break down to include spousal and child abuse.
9. Summarize how genetic traits are passed on from one generation to another.
   a. Define the role heredity plays in determining physical traits and distinguish between dominant and recessive genes.
   b. Identify various genetic and environmental birth defects.
10. Examine health practices to be considered before, during, and after pregnancy.
    a. List reasons that parents decide to have children.
    b. Discuss various methods of family planning.
    c. Discuss prenatal development.
    d. Describe the birth process.
    e. Identify adjustments for parents and newborns during postpartum period.
11. Identify physical, mental, and emotional changes which occur from childhood throughout adolescence.

    a. Trace developmental stages of infancy, childhood, and adolescence.

    b. Name the physical, mental, and emotional changes that happen during adolescence, and state how these changes affect identity and interpersonal relationships.

12. Examine the aging process from adulthood through death.

    a. Discuss the tasks and opportunities of young, middle, and older adulthood.

    b. Identify ways to cope with death and dying.

13. Recognize the causes, transfer, and control of common communicable diseases.

    a. Discuss the causes of infectious diseases, the ways in which diseases are spread, and how the body defends itself.

    b. Identify the stages of an infectious disease and the factors involved in its treatment.

    c. Describe the symptoms and treatment of some common infectious diseases such as chicken pox, mumps, common cold, hepatitis, etc.

14. Recognize the ways to prevent HIV infection and STDs.

    a. Describe the symptoms, mode of transmission, and control of sexually transmitted diseases to include HIV infection and AIDS.

    b. Identify behaviors that put a person at risk for contracting HIV.

15. State causes, signs, and control of noninfectious diseases.

    a. Name the different kinds of cardiovascular diseases and their risk factors.

    b. Describe the warning signs of cancer and the ways to reduce personal risk including breast and/or testicular cancer.

    c. Explain the types and treatments for diabetes, arthritis, and other chronic diseases including those requiring long-term care.

16. Make responsible food choices.

    a. Explain the organization of the Food Guide Pyramid.

    b. Identify six classes of nutrients and describe their function in the human body.

    c. Trace the path of food through the digestive system.

    d. Identify kinds of information provided on a food label.

    e. Create a daily meal plan for his/her own family and calculate the number of calories.

17. Discover the importance of fitness.

    a. Explain the physical and psychological benefits of exercise.

    b. Develop a regular plan of exercise.

18. Analyze the health hazards of tobacco.

    a. List major reasons why people either abstain from or use tobacco.

    b. Describe long-term effects of tobacco use and the dangers of passive smoking.

19. Analyze the health hazards of alcohol.

    a. Identify the short- and long-term effects of alcohol on the body.

    b. Explain the impact of alcohol on alcoholics, their families, and society.

20. Analyze the health hazards of drugs.

    a. Differentiate between legal and illegal drugs and explain the benefits and harmful effects of these drugs.

    b. Describe how drugs work, what their side effects are, and how they are commonly abused.

21. Analyze the health hazards of inhalants.

    a. Discuss various types of inhalants.

    b. Identify dangers associated with use of inhalants.

22. Discuss refusal and intervention skills.

    a. Develop refusal skills for all forms of drugs and inhalants.

b. Demonstrate ways to intervene and help a drug dependent friend.
23. Identify community health care agencies and their functions.
    a. Describe organizations and services that assist community and individuals in health promotion.
    b. List career opportunities in health.
24. Explain how environment affects people and how people affect the environment.
    a. Determine how pollution, natural disasters, overpopulation, and community violence affect our environmental health.
    b. Name sources of air, water, noise, radiation, and ground pollution.
    c. Describe government agencies that protect the environment.
25. Discuss promotion of safety and prevention of accidents.
    a. Describe behaviors which promote home safety.
    b. Describe ways to prepare for disasters in the community.
    c. Identify basic safety rules that help prevent accidents at work and play.
    d. Explain ways to promote vehicle safety to include regular use of seat belts for all ages.
    e. Recognize violent situations and how to avoid them including rape, assault, gang related activities, etc.
26. Discuss and demonstrate procedures for emergency situations.
    a. Identify and assess emergency situations.
    b. Describe how to respond to common emergencies.
    c. Assemble contents of a basic first aid kit.
    d. Practice first aid emergency procedures to include reporting accidents and providing first aid for wounds, choking, fractures, heart attacks, seizures, and poisonings.

Child Development
Course CIP Code: 20.0122

Course Description: Child Development is a course which develops skills related to physical, social, intellectual, and emotional development of the child. It includes instruction on considerations for parenthood, prenatal care, child growth and development, behavior management, needs of exceptional children, and career opportunities. (Grades 9-10-11-12; 1 Semester, .5 Carnegie Unit)

Unit	Title	Hours
1	Considerations for Parenthood	7
2	Child Growth and Development	33
3	Behavior Guidance for Children	10
4	Children with Special Challenges	10
5	Career Opportunities in Child Development	7

Course Name: Child Development
Course CIP Code: 20.0122

1. Discuss considerations before parenting.
   a. Determine the importance of abstinence.
   b. List options for parenthood.
2. Analyze the importance of good parenting.
   a. Determine reasons to plan before parenthood.
   b. Describe the importance of responsible parenthood.
3. Examine responsibilities of good prenatal care.
   a. Identify the physical changes which occur during pregnancy.
   b. Analyze the importance of good prenatal care for the mother and unborn child.
   c. Discuss the costs associated with prenatal care.
4. Discuss the physical, emotional, social, and intellectual needs of the infant, from birth to one year.
   a. Demonstrate basic care of physical needs of infants.
   b. Explore interaction of social and emotional development of an infant.
   c. Describe an intellectually stimulating environment which includes language and sensorimotor development.
5. Discuss meeting physical, emotional, social, and intellectual needs of children from one to three years of age.
   a. Explain how parents and care givers can influence physical development to include nutrition, play experiences, and self-help skills.
   b. Explore the ways social and emotional needs interact in development.
   c. Explain how parents and care givers can influence stages of intellectual development through methods of learning to include incidental learning, trial and error, and imitation.
6. Analyze strategies for managing behavior.
   a. Define and differentiate guidance terms and strategies for managing behavior.
   b. Illustrate appropriate methods for guiding children's behavior.
7. Demonstrate effective ways of dealing with misbehavior.
   a. Discuss reasons for misbehavior in children.
   b. Demonstrate how to handle common child misbehavior such as temper tantrums, separation anxiety, sibling conflicts, aggression, etc.
8. Determine ways to meet the needs of an exceptional child.
   a. Describe the needs of children with physical, mental, and emotional disabilities.
   b. Explain how parents and other care givers can assist and encourage disabled children.
9. Examine types of child abuse.
   a. Identify types of child abuse and neglect.
   b. Summarize factors which may cause and prevent child abuse.
   c. Discuss child abuse intervention procedures.
10. Analyze methods of dealing with crises affecting parent-child relationships such as divorce, moving, death, and family crises.
    a. Construct guidelines for helping children cope with divorce.
    b. Construct guidelines for helping children cope with moving.
    c. Construct guidelines for helping children cope with death.
    d. Construct guidelines for helping children cope with family crises to include illness, loss of job, debts, substance abuse, etc.

11. Discuss professional organization credentialing and state licensure.
    a. Identify professional organizations in the child care industry.
    b. Discuss credentials required for positions in the child care industry.
    c. Identify licensure requirements for Mississippi.
12. Explore career and job opportunities in the field of child development.
    a. Identify competencies needed by care giver personnel to include positive work habits and attitudes, good management skills, good communication skills, leadership skills, ethical behavior, and emotional maturity.
    b. Describe how student leadership activities relate to careers.

Nutrition and Wellness
Course CIP Code: 20.0130

Course Description: Nutrition and Wellness is a course which develops skills related to proper nutrition and the concept of overall wellness. It includes instruction in nutrition, exercise and diet, healthy food choices, meal preparation, and components for a healthy lifestyle. (Grades 9-10-11-12, 1 Semester, .5 Carnegie Unit)

Unit	Title	Hours
1	Nutrition	10
2	Exercise and Diet	12
3	Healthy Food Choices	8
4	Meal Preparation	23
5	Careers in Nutrition and Wellness Industry	5

Course Name: Nutrition and Wellness
Course CIP Code: 20.0130

1. Explain the connection between nutrition and wellness.
   a. Define nutrition and wellness.
   b. Discover how healthy food choices influences wellness.
2. Describe the classes and types of nutrients.
   a. Identify the six major classes of nutrients.
   b. Distinguish between organic and inorganic nutrients.
   c. Identify food sources for each class of nutrients.
   d. Distinguish between fat soluble and water soluble vitamins.
   e. Describe the proper use of nonfood sources of nutrients.
   f. Distinguish between saturated and unsaturated fatty acids.
3. Describe the various functions of the six classes of nutrients.
   a. Identify the functions of carbohydrates in the body.
   b. Identify the functions of fats in the body.
   c. Identify the functions of proteins in the body.
   d. Identify the functions of water in the body.
   e. Identify the functions of vitamins in the body.
   f. Identify the functions of minerals in the body.
4. Explain the processes of digestion, absorption, and metabolism.
   a. Identify the organs involved in digestion.
   b. Describe the stages of digestion.
   c. Explain the process of absorption.
5. Understand the role of energy in well-being and performance.
   a. Determine energy needs to maintain optimal health.
   b. Explain factors that increase or decrease energy usage by the body.
6. Describe the effects of body weight on overall wellness.
   a. Define terms related to body weight including ideal body weight, overweight, obesity, and underweight.
   b. Analyze factors that affect body weight, including physical, emotional, psychological, and hereditary factors.
   c. Research the risks associated with weight problems.
7. Evaluate methods of weight control.
   a. Discuss the role of diet and physical activity as keys to weight control.
   b. Determine whether a weight loss or weight gain program is nutritionally sound and effective.
   c. Discuss the effectiveness of various medications in weight control.
8. Understand malnutrition and its effect on wellness.
   a. Explain the consequences of malnutrition at different stages of growth and development.
   b. Define the common types of eating disorders.
   c. Discuss nutritional problems common to the adolescents.
9. Describe the concept of personal fitness.
   a. Explain terms related to personal fitness including health, wellness, functional health, physically active lifestyle, and sedentary lifestyle.
   b. Explain the difference between exercise and physical fitness.

    c. Discuss attitudes and beliefs about physical fitness including lack of time, poor physical condition, high percentage of body fat, unrealistic physical fitness goals or expectations, lack of knowledge about physical fitness, and negative experiences with physical activity.

10. List health risk factors and their effect on personal fitness.
    a. Identify health risk factors including age, heredity, gender, smoking, hypertension, high blood cholesterol, diabetes, hypokinetic lifestyle, stress, and obesity.
    b. Evaluate the risk factors associated with various lifestyle diseases such as cardiovascular disease, hypertension, cancer, and diabetes.
    c. Discuss problems associated with smoking including cardiovascular disease, lung cancer, throat and mouth cancer, birth defects, hypertension, chronic bronchitis, shorter lifespan, and premature wrinkling of the skin.

11. Understand the role of exercise in maintaining a life-long program of physical fitness.
    a. Explain how obtaining or maintaining physical fitness can benefit each of the following: physical appearance, self-esteem, stress, academic performance, life expectancy, and health care costs.
    b. Discuss the suitability of various safe physical activities for different stages of the life cycle.
    c. List reasons for having a medical examination before beginning a personal fitness program.
    d. Evaluate current level of physical activity as related to overall health and well being.
    e. Demonstrate the use of selected physical exercise equipment.

12. Discuss the concepts of body composition in relation to personal fitness.
    a. Identify the concepts of body type and body composition.
    b. Compare the relationship between body composition and the risk of developing chronic diseases in adults.
    c. Describe the use of body composition evaluations including height/weight chart, body circumference, skinfold, and medical/laboratory methods.

13. Plan menus for individual and groups.
    a. Explain the Food Pyramid.
    b. Analyze existing menus for nutrition and acceptability.
    c. Identify the factors to consider when planning menus for individuals and groups.
    d. Develop menus for individuals and groups considering various factors.
    e. Demonstrate appropriate portion size of each food pyramid group.

14. Apply acceptable food purchasing guidelines.
    a. Identify the steps to follow when purchasing food.
    b. Compare costs, services, and other factors among different types of food stores, including grocery stores, convenience stores, food co-ops, warehouses, specialty stores, government distribution agencies.
    c. Critique food labels for nutritional content.
    d. Apply basic math skills to compute cost of food per serving.
    e. Compare the costs and acceptability of commercially prepared foods versus home prepared foods.
    f. Discuss the government agencies responsible for assuring safety of the food supply.

15. Identify food preparation tools and equipment and their use.
    a. Describe food preparation tools and equipment.
    b. Demonstrate the use of food preparation tools and equipment.

16. Demonstrate the proper procedures for measuring ingredients.
    a. Apply proper procedures for measuring ingredients.
    b. Apply basic math skills in calculating conversions of measurements to equivalents.
17. Evaluate procedures that preserve nutritional quality and safety during food preparation.
    a. Identify major bacteria, viruses, and molds that cause food-borne illnesses.
    b. Describe how bacteria, viruses, and molds make food unsafe.
    c. Discuss steps to follow in handling and storing foods to protect nutritional quality and food safety.
18. Prepare and critique food products.
    a. Interpret recipe terminology and the importance of preparation.
    b. Prepare and/or critique food products using regular and low fat recipes.
    c. Prepare and/or critique food products using two or more cooking methods.
    d. Prepare and/or critique food products comparing convenience versus scratch methods.
19. Demonstrate proper social etiquette to include multicultural situations.
    a. Discuss table service to include formal and informal service.
    b. Demonstrate basic table setting techniques.
    c. Demonstrate proper table manners.
20. Review occupational and leadership opportunities in foods and nutrition.
    a. Investigate career opportunities in the nutrition and wellness areas.
    b. Describe leadership opportunities available from student youth organizations in the school and community.

Personal Development
Course CIP Code: 20.0120

Course Description: Personal Development is a course which develops skills related to positive interpersonal relationships within the family, peer groups, the work place, and the community. It includes instruction on self discovery, personal decisions, relationships with others, establishing goals, career survival skills, and clothing and nutritional sound choices. (Grades 9-10-11-12, 1 Semester, .5 Carnegie Unit)

Unit	Title	Hours
1	Discovering Who You Are	8
2	Personal Design Choices	15
3	Making Healthy Choices	8
4	Developing Healthy Relationships	10
5	Taking Charge of Your Life	10
6	Management of Social Skills	10

Course Name: Personal Development
Course CIP Code: 20.0120

1. Explore personality development in relation to one's self and others.
   a. Identify forces that shape personality development including personality traits, heredity, and environment.
   b. Explain how self-concept influences a person's relationship with others.
   c. Explain how self-esteem influences and enhances behavior.
   d. Demonstrate ways to improve self-esteem.
2. Identify personal traits that build character.
   a. Describe positive character traits such as honesty, self-discipline, responsibility, compassion, motivation, perseverance, etc.
   b. Explain how a person's character is revealed by his/her behavior.
   c. Identify a list of responsibilities that help teens to become responsible adults.
   d. Evaluate personal traits.
3. Expressing personal clothing styles.
   a. Explore influences on clothing choices.
   b. Understand appropriate dress for specific roles and occasions.
   c. Discuss factors to consider when evaluating your wardrobe.
   d. Define and list accessories.
4. Describe elements and principles of design.
   a. Understanding color terminology.
   b. Select flattering clothing by applying the elements and principles of design.
   c. Give guidelines for shopping responsibly.
5. Explain the importance of proper clothing care.
   a. Interpret a fabric care label.
   b. Determine care methods for clothing.
   c. List options for recycling unwanted clothes and expanding your wardrobe.
6. Apply the principles of design to a room.
   a. Design a living space.
   b. Review home furnishing styles and time periods.
   c. Furnish a living space to include storage options.
7. Identify the 3 parts of wellness: physical, social, and emotional.
   a. Describe physical, emotional, and social needs of foods.
   b. List personal and social influences on food choices.
   c. Identify eating disorders and effects on personal food choices.
   d. List positive weight management options.
8. Discuss ways to promote physical and emotional health.
   a. Define the importance of physical activity.
   b. Propose strategies for managing stress.
9. Improve relationships with family members.
   a. Identify ways to improve family relationships.
   b. Practice techniques to enhance parent/child and sibling relationships.
10. Improve relationships with others.
   a. Describe the qualities of friendship.
   b. Identify ways to maintain and improve friendships.
   c. Evaluate techniques for effectively dealing with peer pressure.

      d. Explore opportunities to build relationships in a culturally diverse society.
11. Develop skills that enhance relationships.
      a. Demonstrate communications skills that help to improve relationships.
      b. Explore negotiation and mediation skills.
      c. Identify leadership and citizenship skills.
      d. Describe how proper etiquette and social skills improve self-esteem and relationships with others.
12. Recognize the importance of setting and attaining goals.
      a. Define short-range and long-range goals.
      b. Create strategies for reaching goals.
      c. List the steps in the decision-making process.
      d. Describe the role of decision-making in setting and attaining goals.
13. Develop career survival skills.
      a. Demonstrate job interview skills.
      b. Review personal traits that assist individuals in coping with career and workplace change.
      c. List the causes of stress in the workplace.
      d. Recognize symptoms of stress.
      e. Identify ways to cope with stress.
      f. Define interpersonal skills necessary for maintaining positive relationships in the workplace.
14. Identify workplace ethics.
      a. Define and apply professionalism to different situations.
      b. Demonstrate appropriate dress attire for different situations.
      c. Analyze work place attitudes for different situations.
      d. Discuss the importance of punctuality.
15. Discuss social etiquette of technology usage.
      a. Identify correct cell phone usage.
      b. Identify correct email, chat room, blogs, and MP3 player usage.
      c. Recognize signs of cyber-bullying.
      d. Understand correct usage of internet at work.

Resource Management
Course CIP Code: 20.0129

Course Description: Resource Management is a course which addresses the identification and management of personal resources and family finances to meet the needs and wants of individuals and families throughout the family life cycle, considering a broad range of economic, social, cultural, technological, environmental, and maintenance factors. (Grades 9-10-11-12, 1 Semester, .5 Carnegie Unit)

Unit	Title	Hours
1	Developing Decision-Making Skills	5
2	Managing Personal Finances	30
3	Perfecting the Role of the Consumer	20
4	Balancing Work and Family	15

Course Name: Resource Management
Course CIP Code: 20.0129

1. Evaluate the relationship between decision-making and the quality of life.
   a. Identify how personal decisions and their consequences affect the quality of an individual's life.
   b. Identify how decisions made by an individual affect the quality of life of other individuals, families, communities, and the larger society.
   c. Examine values, goals, and standards and their interrelationships.
   d. Practice effective decision-making techniques.
   e. Discuss management styles in relationship to decision-making skills.
2. Utilize available resources.
   a. Distinguish between human and non-human resources.
   b. Discuss the relationship between resources and decision-making.
   c. Explain how to protect resources.
3. Appraise the relationship between financial management and quality of life.
   a. Identify how an individual's financial management affects the quality of his/her life and others.
   b. Apply decision-making skills and goal planning to financial management.
4. Utilize banking services.
   a. Identify the types of financial institutions.
   b. Assess types of services offered by financial institutions.
   c. Practice banking procedures.
5. Employ a budget process to manage income and expenses.
   a. List different sources of income.
   b. Interpret a paycheck and explain deductions.
   c. Recognize categories of expenses.
   d. Distinguish between fixed and variable expenses.
   e. Define the need for a budget.
   f. Prepare a budget.
   g. Evaluate the effectiveness of a budget plan.
6. Analyze effective use of credit.
   a. Distinguish among various types of credit.
   b. Evaluate different sources of credit.
   c. Recognize benefits and pitfalls of credit use.
   d. Identify procedures for establishing and maintaining a good credit rating to include debt management.
   e. Discuss interest rates.
7. Analyze effective saving and investment practices.
   a. Define a savings goal.
   b. Compare and contrast various methods of savings and investing.
   c. Discuss estate planning and inheritance.
8. Analyze appropriate types of insurance for protecting personal assets.
   a. Distinguish among types of life insurance.
   b. Determine who needs life insurance coverage and the amount needed.
   c. List health insurance coverage plans.
   d. Identify basic types of automobile insurance coverage.

e. List procedures to use in case of an automobile accident.
f. Identify types of property insurance.
g. Name the procedures for filing an insurance claim.
9. Distinguish among local, state, and federal tax assessments.
    a. Discuss local tax assessments to include property, automobile, and sales taxes.
    b. Compute local, state and federal income taxes.
10. Identify a consumer's rights and responsibilities.
    a. Define the role of the consumer in the marketplace.
    b. Define consumer choice, consumer rights, and consumer responsibilities.
    c. Define the role of the consumer in dealing with sales people and merchants.
    d. Discuss simple contracts.
11. Evaluate consumer information.
    a. Interpret product labels.
    b. Interpret product guarantees and warranties.
    c. Describe the impact of advertising.
    d. Evaluate advertising for truthfulness.
    e. Identify procedures for filing a consumer complaint to include contesting an incorrect billing statement.
    f. Identify the protectors of the consumer - government, business and industry, and consumer organizations.
    g. Develop techniques for applying the decision-making process to consumer decisions.
    h. Identify ways to maximize family life through consumer decisions about food, clothing, housing, transportation, leisure, and major household purchases.
12. Demonstrate wise decision-making regarding the balance between personal and global/environmental concern.
    a. Identify practices which show respect for the environment through the wise use of resources.
    b. Identify specific approaches to managing waste properly.
13. Identify the relationship between work and quality of life.
    a. Recognize how individual satisfaction in the choice of work affects the quality of individual and family life.
    b. Compare how the unique differences of diverse family arrangements is impacted by type of work, e.g., dual worker families, families with part-time workers, and single parent families.
14. Describe the influence of families on the workplace.
    a. Discuss the Family and Medical Leave Act, including its nature and scope.
    b. Discuss employer-sponsored child care, including its nature and scope.
    c. Identify the various options available with flexible work scheduling.
    d. Identify the various options available with employer-assistance programs.
15. Identify techniques to enhance communications skills for balancing work and family.
    a. Identify the types of communication to include verbal and nonverbal forms.
    b. Demonstrate the ability to use "I" messages, "You" messages, and "We" messages.
    c. Identify approaches to enhancing communication within the family.
16. Identify techniques to enhance time management skills for balancing work and family.
    a. Identify the tools for managing time.
    b. Describe strategies for time management.

    c. Discuss the purpose and importance of record keeping, including what to keep and what to discard.

17. Identify techniques to enhance stress management skills for balancing work and family.
    a. Discuss the nature and scope of stress from a positive and negative standpoint.
    b. Identify factors contributing to stress among teens.
    c. Distinguish between the positive and negative stress relievers.

18. Identify techniques to enhance conflict resolution skills in balancing work and family.
    a. Discuss conflict, including types and their positive and negative natures.
    b. Discuss factors contributing to conflict.
    c. Discuss strategies for preventing conflict.
    d. Demonstrate approaches to handling conflict.

19. Identify techniques to enhance technology skills in balancing work and family.
    a. Identify ways to maximize home automation to meet family goals.
    b. Describe the influence of technology on the environment.

20. Evaluate the role of change in balancing work and family concerns.
    a. Discuss the nature of change as related to resource management (changing jobs, moving, unemployment, financial problems, etc.).
    b. Discuss the relationship of the rate of change and its effect on the quality of life.
    c. Adopt constructive techniques for initiating and responding to change.

Appendix A: Academic Standards

Algebra I[1]

Competencies and Suggested Objective(s)

A1   Recognize, classify, and use real numbers and their properties.
- a.   Describe the real number system using a diagram to show the relationships of component sets of numbers that compose the set of real numbers.
- b.   Model properties and equivalence relationships of real numbers.
- c.   Demonstrate and apply properties of real numbers to algebraic expressions.
- d.   Perform basic operations on square roots excluding rationalizing denominators.

A2   Recognize, create, extend, and apply patterns, relations, and functions and their applications.
- a.   Analyze relationships between two variables, identify domain and range, and determine whether a relation is a function.
- b.   Explain and illustrate how change in one variable may result in a change in another variable.
- c.   Determine the rule that describes a pattern and determine the pattern given the rule.
- d.   Apply patterns to graphs and use appropriate technology.

A3   Simplify algebraic expressions, solve and graph equations, inequalities and systems in one and two variables.
- a.   Solve, check, and graph linear equations and inequalities in one variable, including rational coefficients.
- b.   Graph and check linear equations and inequalities in two variables.
- c.   Solve and graph absolute value equations and inequalities in one variable.
- d.   Use algebraic and graphical methods to solve systems of linear equations and inequalities.
- e.   Translate problem-solving situations into algebraic sentences and determine solutions.

A4   Explore and communicate the characteristics and operations of polynomials.
- a.   Classify polynomials and determine the degree.
- b.   Add, subtract, multiply, and divide polynomial expressions.
- c.   Factor polynomials using algebraic methods and geometric models.
- d.   Investigate and apply real-number solutions to quadratic equations algebraically and graphically.
- e.   Use convincing arguments to justify unfactorable polynomials.
- f.   Apply polynomial operations to problems involving perimeter and area.

A5   Utilize various formulas in problem-solving situations.
- a.   Evaluate and apply formulas (e.g., circumference, perimeter, area, volume, Pythagorean Theorem, interest, distance, rate, and time).
- b.   Reinforce formulas experimentally to verify solutions.
- c.   Given a literal equation, solve for any variable of degree one.

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[1] *Mississippi mathematics framework—Algebra I.* (2003). Retrieved September 10, 2003, from http://www.mde.k12.ms.us/curriculum/index_1.htm

        d.   Using the appropriate formula, determine the length, midpoint, and slope of a segment in a coordinate plane.

        e.   Use formulas (e.g., point-slope and slope-intercept) to write equations of lines.

A6   Communicate using the language of algebra.

        a.   Recognize and demonstrate the appropriate use of terms, symbols, and notations.

        b.   Distinguish between linear and non-linear equations.

        c.   Translate between verbal expressions and algebraic expressions.

        d.   Apply the operations of addition, subtraction, and scalar multiplication to matrices.

        e.   Use scientific notation to solve problems.

        f.   Use appropriate algebraic language to justify solutions and processes used in solving problems.

A7   Interpret and apply slope as a rate of change.

        a.   Define slope as a rate of change using algebraic and geometric representations.

        b.   Interpret and apply slope as a rate of change in problem-solving situations.

        c.   Use ratio and proportion to solve problems including direct variation ($y=kx$).

        d.   Apply the concept of slope to parallel and perpendicular lines.

A8   Analyze data and apply concepts of probability.

        a.   Collect, organize, graph, and interpret data sets, draw conclusions, and make predictions from the analysis of data.

        b.   Define event and sample spaces and apply to simple probability problems.

        c.   Use counting techniques, permutations, and combinations to solve probability problems.

Biology I[2]

Competencies and Suggested Objective(s)

B1   Utilize critical thinking and scientific problem solving in designing and performing biological research and experimentation.

        a.   Demonstrate the proper use and care for scientific equipment used in biology.

        b.   Observe and practice safe procedures in the classroom and laboratory.

        c.   Apply the components of scientific processes and methods in the classroom and laboratory investigations.

        d.   Communicate results of scientific investigations in oral, written, and graphic form.

B2   Investigate the biochemical basis of life.

        a.   Identify the characteristics of living things.

        b.   Describe and differentiate between covalent and ionic bonds using examples of each.

        c.   Describe the unique bonding and characteristics of water that makes it an essential component of living systems.

        d.   Classify solutions using the pH scale and relate the importance of pH to organism survival.

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[2] *Mississippi science framework—Biology I*. (2003). Retrieved September 10, 2003, from http://www.mde.k12.ms.us/curriculum/index_1.htm

        e.   Compare the structure, properties and functions of carbohydrates, lipids, proteins and nucleic acids in living organisms.

        f.   Explain how enzymes work and identify factors that can affect enzyme action.

B3   Investigate cell structures, functions, and methods of reproduction.

        a.   Differentiate between prokaryotic and eukaryotic cells.

        b.   Distinguish between plant and animal (eukaryotic) cell structures.

        c.   Identify and describe the structure and basic functions of the major eukaryotic organelles.

        d.   Describe the way in which cells are organized in multicellular organisms.

        e.   Relate cell membrane structure to its function in passive and active transport.

        f.   Describe the main events in the cell cycle and cell mitosis including differences in plant and animal cell divisions.

        g.   Relate the importance of meiosis to sexual reproduction and the maintenance of chromosome number.

        h.   Identify and distinguish among forms of asexual and sexual reproduction.

B4   Investigate the transfer of energy from the sun to living systems.

        a.   Describe the structure of ATP and its importance in life processes.

        b.   Examine, compare, and contrast the basic processes of photosynthesis and cellular respiration.

        c.   Compare and contrast aerobic and anaerobic respiration.

B5   Investigate the principles, mechanisms, and methodology of classical and molecular genetics.

        a.   Compare and contrast the molecular structures of DNA and RNA as they relate to replication, transcription, and translation.

        b.   Identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes.

        c.   Analyze the applications of DNA technology (forensics, medicine, agriculture).

        d.   Discuss the significant contributions of well-known scientists to the historical progression of classical and molecular genetics.

        e.   Apply genetic principles to solve simple inheritance problems including monohybrid crosses, sex linkage, multiple alleles, incomplete dominance, and codominance.

        f.   Examine inheritance patterns using current technology (gel electrophoresis, pedigrees, karyotypes).

B6   Investigate concepts of natural selection as they relate to diversity of life.

        a.   Analyze how organisms are classified into a hierarchy of groups and subgroups based on similarities and differences.

        b.   Identify characteristics of kingdoms including monerans, protists, fungi, plants and animals.

        c.   Differentiate among major divisions of the plant and animal kingdoms (vascular/non-vascular; vertebrate/invertebrate).

        d.   Compare the structures and functions of viruses and bacteria relating their impact on other living organisms.

        e.   Identify evidence of change in species using fossils, DNA sequences, anatomical and physiological similarities, and embryology.

        f.   Analyze the results of natural selection in speciation, diversity, adaptation, behavior and extinction.

B7   Investigate the interdependence and interactions that occur within an ecosystem.
    a.   Analyze the flow of energy and matter through various cycles including carbon, oxygen, nitrogen and water cycles.
    b.   Interpret interactions among organisms in an ecosystem (producer/consumer/decomposer, predator/prey, symbiotic relationships and competitive relationships).
    c.   Compare variations, tolerances, and adaptations of plants and animals in major biomes.
    d.   Investigate and explain the transfer of energy in an ecosystem including food chains, food webs, and food pyramids.
    e.   Examine long and short-term changes to the environment as a result of natural events and human actions.

English II[3]

Competencies and Suggested Objective(s)

E1   Produce writing which reflects increasing proficiency through planning, writing, revising, and editing and which is specific to audience and purpose.
    a.   Produce individual and/or group compositions and/or projects to persuade, tell a story, describe, create an effect, explain or justify an action or event, inform, entertain, etc.
    b.   Produce writing typically used in the workplace such as social, business, and technical correspondence; explanation of procedures; status reports; research findings; narratives for graphs; justification of decisions, actions, or expenses; etc.
    c.   Write a response, reaction, interpretation, analysis, summary, etc., of literature, other reading matter, or orally presented material.
    d.   Revise to ensure effective introductions, details, wording, topic sentences, and conclusions.
E2   Communicate ideas for a variety of school and other life situations through listening, speaking, and reading aloud.
    a.   Listen to determine the main idea and supporting details, to distinguish fact from opinion, and to determine a speaker's purpose or bias.
    b.   Speak with appropriate intonation, articulation, gestures, and facial expression.
    c.   Speak effectively to explain and justify ideas to peers, to inform, to summarize, to persuade, to entertain, to describe, etc.
E3   Read, evaluate, and use print, non-print, and technological sources to research issues and problems, to present information, and to complete projects.
    a.   Read, view, and listen to distinguish fact from opinions and to recognize persuasive and manipulative techniques.
    b.   Access both print and non-print sources to produce an I-Search paper, research paper, or project.
    c.   Use computers and audio-visual technology to access and organize information for purposes such as resumes, career search projects, and analytical writings, etc.

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[3] *Mississippi language arts framework—English II*. (2003). Retrieved September 10, 2003, from http://www.mde.k12.ms.us/curriculum/index_1.htm

d. Use reference sources, indices, electronic card catalog, and appropriate research procedures to gather and synthesize information.

E4 Work individually and as a member of a team to analyze and interpret information, to make decisions, to solve problems, and to reflect, using increasingly complex and abstract thinking.

a. Interact with peers to examine real world and literary issues and ideas.

b. Show growth in critical thinking, leadership skills, consensus building, and self-confidence by assuming a role in a group, negotiating compromise, and reflecting on individual or group work.

E5 Complete oral and written presentations which exhibit interaction and consensus within a group.

a. Share, critique, and evaluate works in progress and completed works through a process approach.

b. Communicate effectively in a group to present completed projects and/or compositions.

c. Edit oral and written presentations to reflect correct grammar, usage, and mechanics.

E6 Explore cultural contributions to the history of the English language and its literature.

a. Explore a variety of works from various historical periods, geographical locations, and cultures, recognizing their influence on language and literature.

b. Identify instances of dialectal differences which create stereotypes, perceptions, and identities.

c. Recognize root words, prefixes, suffixes, and cognates.

d. Relate how vocabulary and spelling have changed over time.

E7 Discover the power and effect of language by reading and listening to selections from various literary genres.

a. Listen to and read aloud selected works to recognize and respond to the rhythm and power of language to convey a message.

b. Read aloud with fluency and expression.

c. Analyze the stylistic devices, such as alliteration, assonance, word order, rhyme, onomatopoeia, etc., that make a passage achieve a certain effect.

d. Demonstrate how the use of language can confuse or inform, repel or persuade, or inspire or enrage.

e. Analyze how grammatical structure or style helps to create a certain effect.

E8 Read, discuss, analyze, and evaluate literature from various genres and other written material.

a. Read and explore increasingly complete works, both classic and contemporary, for oral discussion and written analysis.

b. Read, discuss, and interpret literature to make connections to life.

c. Read from a variety of genres to understand how the literary elements contribute to the overall quality of the work.

d. Identify qualities in increasingly complex literature that have produced a lasting impact on society.

e. Read for enjoyment, appreciation, and comprehension of plot, style, vocabulary, etc.

E9 Sustain progress toward fluent control of grammar, mechanics, and usage of standard English in the context of writing and speaking.

a. Infuse the study of grammar and vocabulary into written and oral communication.
b. Demonstrate, in the context of their own writing, proficient use of the conventions of standard English, including, but not limited to, the following: complete sentences, subject-verb agreement, plurals, spellings, homophones, possessives, verb forms, punctuation, capitalization, pronouns, pronoun-antecedent agreement, parallel structure, and dangling and misplaced modifiers.
c. Give oral presentations to reinforce the use of standard English.
d. Employ increasingly proficient editing skills to identify and solve problems in grammar, usage, and structure.

E10 Use language and critical thinking strategies to serve as tools for learning.
a. Use language to facilitate continuous learning, to record observations, to clarify thought, to synthesize information, and to analyze and evaluate language.
b. Interpret visual material orally and in writing.

U. S. History from 1877[4]

Competencies and Suggested Objective(s)

H1 Explain how geography, economics, and politics have influenced the historical development of the United States in the global community.
  a. Apply economic concepts and reasoning when evaluating historical and contemporary social developments and issues (e.g., gold standard, free coinage of silver, tariff issue, laissez faire, deficit spending, etc.).
  b. Explain the emergence of modern America from a domestic perspective (e.g., frontier experience, Industrial Revolution and organized labor, reform movements of Populism and Progressivism, Women's Movement, Civil Rights Movement, the New Deal, etc.).
  c. Explain the changing role of the United States in world affairs since 1877 through wars, conflicts, and foreign policy (e.g., Spanish-American War, Korean conflict, containment policy, etc.).
  d. Trace the expansion of the United States and its acquisition of territory from 1877 (e.g., expansionism and imperialism).

H2 Describe the impact of science and technology on the historical development of the United States in the global community.
  a. Analyze the impact of inventions on the United States (e.g., telephone, light bulb, etc.).
  b. Examine the continuing impact of the Industrial Revolution on the development of our nation (e.g., mass production, computer operations, etc.).
  c. Describe the effects of transportation and communication advances since 1877.

H3 Describe the relationship of people, places, and environments through time.
  a. Analyze human migration patterns since 1877 (e.g., rural to urban, the Great Migration, etc.).
  b. Analyze how changing human, physical, geographic characteristics can alter a regional landscape (e.g., urbanization, Dust Bowl, etc.).

H4 Demonstrate the ability to use social studies tools (e.g., timelines, maps, globes, resources, graphs, a compass, technology, etc.).
  a. Interpret special purpose maps, primary/secondary sources, and political cartoons.
  b. Analyze technological information on graphs, charts, and timelines.
  c. Locate areas of international conflict (e.g., Caribbean, Southeast Asia, Europe, etc.).

H5 Analyze the contributions of Americans to the ongoing democratic process to include civic responsibilities.
  a. Examine various reform movements (e.g., Civil Rights, Women's Movement, etc.).
  b. Examine the government's role in various movements (e.g., arbitration, 26th Amendment, etc.).
  c. Examine the role of government in the preservation of citizens' rights (e.g., 19th Amendment, Civil Rights Act of 1964).

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[4] *Mississippi social studies framework—U.S. History from 1877.* (2003). Retrieved September 10, 2003, from http://www.mde.k12.ms.us/curriculum/index_1.htm

d.   Examine individuals' duties and responsibilities in a democratic society (e.g., voting, volunteerism, etc.).

Appendix B: 21st Century Skills[5]

CS1   Global Awareness
- Using 21st century skills to understand and address global issues
- Learning from and working collaboratively with individuals representing diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
- Promoting the study of non-English language as a tool for understanding other nations and cultures

CS2   Financial, Economic, and Business Literacy
- Knowing how to make appropriate personal economic choices
- Understanding the role of the economy and the role of business in the economy
- Applying appropriate 21st century skills to function as a productive contributor within an organizational setting
- Integrating oneself within and adapting continually to our nation's evolving economic and business environment

CS3   Civic Literacy
- Being an informed citizen to participate effectively in government
- Exercising the rights and obligations of citizenship at local, state, national, and global levels
- Understanding the local and global implications of civic decisions
- Applying 21st century skills to make intelligent choices as a citizen

CS4   Information and Communication Skills
- Information and media literacy skills: Analyzing, accessing, managing, integrating, evaluating, and creating information in a variety of forms and media; understanding the role of media in society
- Communication skills: Understanding, managing, and creating effective oral, written, and multimedia communication in a variety of forms and contexts

CS5   Thinking and Problem-Solving Skills
- Critical thinking and systems thinking: Exercising sound reasoning in understanding and making complex choices, understanding the interconnections among systems
- Problem identification, formulation, and solution: Ability to frame, analyze, and solve problems
- Creativity and intellectual curiosity: Developing, implementing, and communicating new ideas to others, staying open and responsive to new and diverse perspectives

CS6   Interpersonal and Self-Directional Skills
- Interpersonal and collaborative skills: Demonstrating teamwork and leadership, adapting to varied roles and responsibilities, working productively with others, exercising empathy, respecting diverse perspectives
- Self-direction: Monitoring one's own understanding and learning needs, locating appropriate resources, transferring learning from one domain to another
- Accountability and adaptability: Exercising personal responsibility and flexibility in personal, workplace, and community contexts; setting and meeting high standards and goals for one's self and others; tolerating ambiguity

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[5] *21st century skills*. (n.d.). Washington, DC: Partnership for 21st Century Skills.

- Social responsibility: Acting responsibly with the interests of the larger community in mind; demonstrating ethical behavior in personal, workplace, and community contexts

MISSISSIPPI CURRICULUM
FRAMEWORKS FOR
VOCATIONAL–TECHNICAL PROGRAMS

POSTSECONDARY
EXECUTIVE SUMMARY

2008

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REVISED POSTSECONDARY CURRICULUM FRAMEWORKS
2008 EDITION
EXECUTIVE SUMMARY
FOREWORD

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Vocational–technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact local vocational–technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and vocational skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide vocational educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Referenced throughout the courses of the curriculum are the 21st Century Skills, which were developed by the Partnership for 21st Century Skills, a group of business and education organizations concerned about the gap between the knowledge and skills learned in school and those needed in communities and the workplace. A portion of the 21st Century Skills addresses learning skills needed in the 21st century, including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills. The need for these types of skills has been recognized for some time, and the 21st Century Skills are adapted in part from the 1991 report from the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). Another important aspect of learning and working in the 21st century involves technology skills, and the International Society for Technology in Education, developers of the National Educational Technology Standards (NETS), were strategic partners in the Partnership for 21st Century Skills.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses that focus on the development of occupational competencies. Each vocational–technical course in this sequence has been written using a common format, which includes the following components:

- Course Name – A common name that will be used by all community/junior colleges in reporting students

- Course Abbreviation – A common abbreviation that will be used by all community/junior colleges in reporting students

- Classification – Courses may be classified as the following:
  - Vocational–technical core – A required vocational–technical course for all students
  - Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs
  - Vocational–technical elective – An elective vocational–technical course
  - Related academic course – An academic course that provides academic skills and knowledge directly related to the program area
  - Academic core – An academic course that is required as part of the requirements for an associate's degree

- Description – A short narrative that includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester

- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course

- Corequisites – A listing of courses that may be taken while enrolled in the course

- Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and of the suggested student objectives that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
  - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
  - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
  - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed and revised
  - Activities that implement components of the Mississippi Tech Prep initiative, including integration of academic and vocational–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary vocational–technical programs
  - Individualized learning activities, including worksite learning activities, to prepare individuals better in the courses for their chosen occupational areas

- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.

- Programs that offer an Associate of Applied Science degree must include a minimum 15 semester credit hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
    - 3 semester credit hours   Math/Science Elective
    - 3 semester credit hours   Written Communications Elective
    - 3 semester credit hours   Oral Communications Elective
    - 3 semester credit hours   Humanities/Fine Arts Elective
    - 3 semester credit hours   Social/Behavioral Science Elective

It is recommended that courses in the academic core be spaced out over the entire length of the program so that students complete some academic and vocational–technical courses each semester. Each community/junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- Technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their areas.

In order to provide flexibility within the districts, individual courses within a framework may be customized by:
- adding new competencies and suggested objectives.
- revising or extending the suggested objectives for individual competencies.
- adjusting the semester credit hours of a course to be up one hour or down one hour (after informing the State Board for Community and Junior Colleges [SBCJC] of the change).

In addition, the curriculum framework as a whole may be customized by:
- resequencing courses within the suggested course sequence.
- developing and adding a new course that meets specific needs of industries and other clients in the community or junior college district (with SBCJC approval).
- utilizing the technical elective options in many of the curricula to customize programs.

COMMUNITY/JUNIOR COLLEGE VOCATIONAL–TECHNICAL PROGRAMS
2008 REVISION

Automotive Vehicles and Accessories Marketing Operations
Business and Marketing Management and Related Technology
Food Production and Management Technology
Irrigation Management Technology
Massage Therapy
Pharmacy Technology
Pipefitter/Steamfitter
Plumbing Technology
Practical Nursing
Process Operations Technology
Sheet Metal Technology

Table of Contents

PROGRAM DESCRIPTIONS AND SUGGESTED COURSE SEQUENCES

AUTOMOTIVE VEHICLES AND ACCESSORIES MARKETING OPERATIONS

Program Description

Automotive Vehicles and Accessories Marketing Operations includes theory, laboratory, shop work, and other specialized learning experiences relative to receiving, stocking, selling, and shipping merchandise in the automotive aftermarket. Included is the study of mathematical procedures related to business operation, engine theory and operation, automotive systems, the use of office machines, auto parts store management, customer relations, and computer-based instruction.

Specific training will enable the student to ascertain the correct part required by the customer, advise the customer according to the description given, read various catalogs to determine the stock number and price, measure engine parts, mix paint, display merchandise, determine correct interchange parts, accept telephone orders, and take inventory.

Instruction emphasizes distribution of parts and services within the automotive aftermarket in establishments such as distributors, jobbers, retail part stores, specialty shops, car dealers, independent garages, fleet garages, and service stations.

Automotive Vehicles and Accessories Marketing Operations is a 1-year certificate program designed to prepare automotive parts salespersons for entry-level positions in automotive parts marketing.

This document was developed according to national standards for automotive parts service as prepared in *The Official ASE Catalog of Test/Parts Specialist* by the National Institute for Automotive Service Excellence in Leesburg, VA.

Suggested Course Sequence[*]
Automotive Vehicles and Accessories Marketing Operations

FIRST YEAR

2 sch	Orientation and Safety Procedures (AAV 1112)	6 sch	Catalog Information Systems (AAV 1316)
6 sch	Operational Procedures (AAV 1126)	2 sch	Merchandising (AAV 1322)
4 sch	Automotive Systems I (AAV 1214)	4 sch	Internal Operations (AAV 1414)
4 sch	Automotive Systems II (AAV 1224)	4 sch	Internal Sales (AAV 1424)

16 sch   16 sch

SUMMER TERM

1–6 sch   Supervised Work Experience in Automotive Vehicles and Accessories Marketing [AAV 192(1–6)]

OR

1–3 sch   Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)]

1–6 sch

[*] Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

BUSINESS AND MARKETING MANAGEMENT AND RELATED TECHNOLOGY

Business and Marketing Management Technology

The Business and Marketing Management Technology program of study is designed to provide specialized occupational instruction in all phases of marketing management including e-business, international marketing, and multimedia presentations. This program prepares students for careers in dynamic marketing professions. A combination of classwork and practical experience is stressed. Completion of the 2-year program leads to an associate's degree in Applied Science.

Fashion Marketing Technology

The Fashion Marketing Technology program of study is designed to provide specialized instruction in all phases of fashion marketing in order to prepare students for careers in fashion and its related professions and industries such as manager, wardrobe consultant, buyer, sale representative, visual merchandiser, and fashion director. A combination of classwork and practical experience is stressed. A Certificate of Fashion Marketing may be issued at the discretion of the local district. The Associate of Applied Science degree is earned upon successful completion of the Fashion Marketing Technology program.

Suggested Course Sequence[*]
Business and Marketing Management Technology

FIRST YEAR

3 sch	Written Communications Elective
3 sch	Principles of Marketing (MMT 1113)
3 sch	Computer Related Elective
3 sch	MMT/FMT Elective[‡]
3 sch	MMT/FMT Elective[‡]
3 sch	Oral Communications Elective

18 sch

3 sch	Social/Behavioral Science Elective
3 sch	Accounting Elective
3 sch	Advertising (MMT 1323)
3 sch	Personal Selling (MMT 1313)
3 sch	Principles of Management (MMT 2213)[***]

15 sch

SECOND YEAR

3 sch	Marketing Management (MMT 1123)[*****]
3 sch	E-Commerce Marketing (MMT 2313)
3 sch	Math/Science Elective
3 sch	Restricted Elective[†]
3 sch	MMT/FMT Elective[‡]

15 sch

3 sch	Human Resource Management (MMT 2233)[****]
3 sch	Legal Environment of Business I (BAD 2413)
3 sch	MMT/FMT Elective[‡]
3 sch	MMT/FMT Elective[‡]
3 sch	Restricted Elective[†]
3 sch	Humanities/Fine Arts Elective

18 sch

[*] Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

[†] Principles of Economics (Macroeconomics) (ECO 2113)
Principles of Economics (Microeconomics) (ECO 2123)
Internship in Business and Marketing Management Technology (MMT 291[1–6])
Work-Based Learning I, II, III, IV, V, and VI (WBL 191[1–3], WBL 192[1–3], WBL 193[1–3], WBL 291[1–3], WBL 292[1–3], and WBL 293[1–3])
Or other instructor-approved related technical course or academic course

[‡] Merchandising Math (MMT 1413)
Marketing Seminar (MMT 1753)
Marketing Seminar I, II, III, and IV (MMT 1711, MMT 1721, MMT 1731, and MMT 1741)
Marketing Case Studies (MMT 2243)
Multimedia Presentations for Marketing (MMT 2333)

Marketing Web Page Design (MMT 2343)
Retail Management (MMT 2423)
Entrepreneurship (MMT 2513)
Event Management (MMT 2523)
International Marketing (MMT 2613)
Fashion Design Fundamentals (FMT 1113)
Fashion Marketing (FMT 1213)
Product Knowledge (FMT 1223)
Buying (FMT 1233)
Textiles in Fashion (FMT 1313)
Visual Merchandising (FMT 2414)
Image and Wardrobe Consulting (FMT 2513)
Fashion Sales Direction (FMT 2613)

***	Hospitality Supervision (HRT 2613) may be substituted for Principles of Management (MMT 2213).

****	Hospitality Human Resource Management (HRT 2623) may be substituted for Human Resources Management (MMT 2233).

******	Marketing Hospitality Services (HRT 2713) may be substituted for Marketing Management (MMT 1123).

Note: Business and Marketing Management Technology Lab (MMT 1000) is sometimes used as an optional open lab for all lab assignments in the program.

Suggested Course Sequence*
Fashion Marketing Technology

FIRST YEAR

3 sch	Written Communications Elective
3 sch	Principles of Marketing (MMT 1113)
3 sch	Fashion Design Fundamentals (FMT 1113)
3 sch	Fashion Marketing (FMT 1213)
3 sch	Computer Elective

15 sch

3 sch	Image and Wardrobe Consulting (FMT 2513)
3 sch	Principles of Management (MMT 2213)
3 sch	Advertising (MMT 1323)
3 sch	Oral Communications Elective
3 sch	Textiles in Fashion (FMT 1313)
3 sch	Personal Selling (MMT 1313)

18 sch

SECOND YEAR

3 sch	Humanities/Fine Arts Elective
4 sch	Visual Merchandising (FMT 2414)
3 sch	Restricted Elective†
3 sch	Math/Science Elective
3 sch	MMT/FMT Elective‡

16 sch

3 sch	Buying (FMT 1233)
3 sch	MMT/FMT Elective†
3 sch	Restricted Elective†
3 sch	Social/Behavioral Science Elective
3 sch	MMT/FMT Elective‡

15 sch

*   Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

†   Internship in Fashion Marketing Technology (FMT 2913)
Internship in Fashion Marketing Technology (FMT 2923)
Internship in Fashion Marketing Technology (FMT 2936)
Work-Based Learning I, II, III, IV, V, and VI (WBL 191[1–3], WBL 192[1–3], WBL 193[1–3], WBL 291[1–3], WBL 292[1–3], and WBL 293[1–3])
Or other instructor-approved related technical course or academic course

‡   Merchandising Math (MMT 1413)
Marketing Seminar (MMT 1753)
Marketing Seminar I, II, III, and IV (MMT 1711, MMT 1721, MMT 1731, and MMT 1741)
Marketing Case Studies (MMT 2243)
Multimedia Presentations for Marketing (MMT 2333)
Marketing Web Page Design (MMT 2343)

Retail Management (MMT 2423)
Entrepreneurship (MMT 2513)
Event Management (MMT 2523)
International Marketing (MMT 2613)
Product Knowledge (FMT 1223)
Fashion Sales Direction (FMT 2613)
Accounting Elective
Other instructor-approved related technical course or academic course

Note: Business and Marketing Management Technology Lab (MMT 1000) is sometimes used as an optional open lab for all lab assignments in the program.

FOOD PRODUCTION AND MANAGEMENT TECHNOLOGY

The Food Production and Management Technology curriculum provides a Vocational Certificate and an Associate of Applied Science degree. Students may receive a certificate after completing 34 semester hours of vocational–technical courses. The program for an Associate of Applied Science degree is available for students completing 70 semester hours, which include 15 semester hours of academic credit. The program offers study in areas of food production, management, and service for restaurant operations, quantity food operations, and catering businesses. Emphasis is placed on technical skills in preparing students for entry-level job opportunities in production and management in both commercial and institutional food service settings.

Industry standards referenced are from the National Restaurant Association Educational Foundations ServSafe® and ManageFirst programs.

Suggested Course Sequence*
Food Production and Management Technology

Associate of Applied Science Degree

FIRST YEAR

3 sch   Fundamentals of Operational
        Procedures in Food Service (FPV
        1113)
3 sch   Food Service Sanitation (FPV 1213)
5 sch   Culinary Arts I (FPV 1315)
3 sch   Front of the House (FPV 1413)
3 sch   Oral Communications Elective

_____
17 sch

3 sch   Management Procedures and
        Recordkeeping (FPV 1123)
6 sch   Culinary Arts II (FPV 1326)
3 sch   Supervised Work Experience in
        Food Production and Management I
        [FPV 291(1–3)] or Work-Based
        Learning I, II, III, IV, V, VI [WBL
        191(1–3), WBL 192(1–3), WBL
        193(1–3), WBL 291(1–3), WBL
        292(1–3), WBL 293(1–3)]
3 sch   Elective***
3 sch   Written Communications Elective

_____
18 sch

SECOND YEAR

3 sch   Purchasing and Storage (FPV 2223)
5 sch   Catering Management (FPV 2515)
3 sch   Menu Planning and Cost Control
        (FPV 2613)
3 sch   Nutrition (FPV 2713)
3 sch   Math/Science Elective

_____
17 sch

6 sch   Bakery Production and Management
        (2336)
3 sch   Food Service Management (FPV
        2813)
3 sch   Supervised Work Experience in
        Food Production and Management II
        [FPV 292(1–3)] or Work-Based
        Learning I, II, III, IV, V, VI [WBL
        191(1–3), WBL 192(1–3), WBL
        193(1–3), WBL 291(1–3), WBL
        292(1–3), WBL 293(1–3)]
3 sch   Humanities/Fine Arts Elective
3 sch   Social/Behavioral Science Elective

_____
18 sch

*   Students who lack entry-level skills in math, English, science, etc. will be provided
        related studies.

***APPROVED ELECTIVES

Fundamentals of Microcomputer Applications (CPT 1113)
Science and Technology (ATE 1113)
Any business or related vocational or academic elective by permission of instructor

Suggested Course Sequence*
Food Production and Management Technology

Certificate Option

FIRST YEAR

3 sch Fundamentals of Operational Procedures in Food Service (FPV 1113)

3 sch Food Service Sanitation (FPV 1213)

5 sch Culinary Arts I (FPV 1315)

3 sch Front of the House (FPV 1413)

3 sch Menu Planning and Cost Control (FPV 2613)

_____

17 sch

3 sch Management Procedures and Recordkeeping (FPV 1123)

6 sch Culinary Arts II (FPV 1326)

3 sch Nutrition (FPV 2713)

3 sch Purchasing and Storage (FPV 2223)

3–6 sch Elective**

_____

18–21 sch

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

**APPROVED ELECTIVES

Food Service Management (FPV 2813)

Bakery Production and Management (FPV 2336)

Catering Management (FPV 2515)

Supervised Work Experience in Food Production and Management Technology I [FPV 291(1–3)]

Supervised Work Experience in Food Production and Management Technology II [FPV 292(1–3)]

Science and Technology (ATE 1113)

Work-Based Learning I, II, III, IV, V, VI [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]

IRRIGATION MANAGEMENT TECHNOLOGY

Irrigation Management Technology is designed to provide students with skills that lead to employment in residential and commercial irrigation industries. The program includes training in the areas of irrigation system design and installation, system troubleshooting and repair, and irrigation business and shop management. Students enrolled in the program have the options of taking a 1-year course of study and receiving a technical certificate or taking a 2-year course of study and receiving an Associate of Applied Science degree. A minimum of 42 semester credit hours is required to earn the technical certificate. A minimum of 72 semester credit hours is required to earn the Associate of Applied Science degree. Students who complete the program will be qualified to sit for the Certified Landscape or Certified Golf Irrigation Auditor's examinations after earning 1 year of experience in the field. Students will be qualified to sit for the Certified Irrigation Contractor and Certified Irrigation Designer examination after earning 2 years of experience in the field. Students may sit for the first two steps of the Certified Irrigation Designer examination upon completion of the program. The remaining steps (3 and 4) may be completed after obtaining t2 years of field experience.

Required courses for a technical certificate in Irrigation Management Technology include the following:

2 sch   Introduction to Irrigation (IRM 1112)
3 sch   Residential Irrigation Design (IRM 1123)
4 sch   Irrigation Systems Installation I (IRM 1144)
3 sch   Irrigation Systems Installation II (IRM 1243)
3 sch   Irrigation Troubleshooting and Repair (IRM 1223)
3 sch   Irrigation Pumps, Controls, and Relays (IRM 2233)
4 sch   Botany/Botany Lab (BOT 1314)
4 sch   Survey of Microcomputer Applications (CPT 1324)
3 sch   Landscape Business Management (HLT 2313)
3 sch   Landscape Construction (HLT 2713)
3 sch   Spanish Conversation I (ATE 1213)
3 sch   Green Industry Cost Estimating (HLT 2123 or IRM 2123)
2 sch   Irrigation Auditing (IRM 2312)
3 sch   Supervised Work Experience in Irrigation Management Technology (IRM 2923)

Suggested Course Sequence*
Irrigation Management Technology

Associate of Applied Science Degree

FIRST YEAR

2 sch	Introduction to Irrigation (IRM 1112)		3 sch	Irrigation Pumps, Controls, and Relays (IRM 2233)
4 sch	Irrigation Systems Installation I (IRM 1144)		3 sch	Irrigation Systems Installation II (IRM 1243)
4 sch	Botany/Botany Lab (BIO 1314)		3 sch	Fine Arts/Humanities Elective
3 sch	Written Communications Elective		3 sch	Social Behavioral Science Elective
2 sch	Green Industry Seminar (HLT 1222)		3 sch	Approved Elective**
1 sch	Leadership Management (HLT 1411)		1 sch	Leadership Management II (HLT 1421)

16 sch   16 sch

SUMMER TERM

3 sch   Supervised Work Experience in Irrigation Management Technology (IRM 2923)

SECOND YEAR

3 sch	Approved Computer Elective		3 sch	Landscape Construction (HLT 2713)
3 sch	Green Industry Cost Estimating (IRM 2123)		3 sch	Landscape Business Management (HLT 2313)
3 sch	Oral Communications Elective		3 sch	Irrigation Troubleshooting and Repair (IRM 1223)
3 sch	Approved Elective**		3 sch	Residential Irrigation Design (IRM 1123)
3 sch	Spanish Conversation I			
3 sch	Humanities/Fine Arts Elective		1 sch	Leadership Management IV (HLT 1441)
1 sch	Leadership Management III (HLT 1431)		2 sch	Irrigation Auditing (IRM 2312)
			3 sch	Approved Elective**

19 sch   18 sch

*   Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

**APPROVED ELECTIVES

Any IRM, HLT, or TEM course may be selected as an approved elective with faculty approval. Other approved electives include the following:

DDT 1413	Elementary Surveying
BOT 1433	Business Accounting or ACC 1213 Principles of Accounting
BOT 1313	Applied Business Math or BAD 1313 Business Mathematics
BAD 2413	Legal Environment of Business
PHY 1214	Survey of Physics

MASSAGE THERAPY

The Massage Therapy program is a 1-year certificate program designed to prepare students for careers as professional massage therapists. The curriculum prepares students to develop knowledge and skills for practicing massage therapy. Core courses emphasize massage therapy principles, ethics, business application, pathology, anatomy and physiology, technique modalities, and kinesiology. Students completing this program should be able to find jobs in employment settings such as spas, clinics, fitness centers, wellness centers, corporations, sports organizations, doctors' offices, and private practices.

Industry standards referenced are from the National Certification Examination for Therapeutic Massage and Bodywork Content Outline.

Suggested Course Sequence*
Massage Therapy

FIRST YEAR

First Semester	Second Semester
1 sch CPR, First Aid, and OSHA Standards (MGV 1111)	4 sch Massage Therapy II (MGV 1244)
4 sch Introduction to Massage Therapy (MGV 1214)	3 sch Massage Therapy II Lab (MGV 1253)
4 sch Massage Therapy I (MGV 1224)	3 sch Massage Therapy Clinical Lab II (MGV 1263)
2 sch Massage Therapy I Lab (MGV 1232)	2 sch Specialized Modalities (MGV 1272)
1 sch Massage Therapy Clinical Lab I (MGV 1281)	2 sch Kinesiology (MGV 1332)
3 sch Anatomy and Physiology for Massage Therapy (MGV 1313)	3 sch Anatomy and Physiology for Massage Therapy II (MGV 1353)
3 sch Pathology and Medical Terminology (MGV 1343)	1 sch Business and Marketing of Massage Therapy (MGV 1511)
18 sch	18 sch

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

PHARMACY TECHNOLOGY

The Pharmacy Technology curriculum is a 2-year program of study designed to prepare the student for employment and advancement in the pharmacy field. The curriculum requires a minimum of 72 hours of courses in order to obtain an Associate of Applied Science degree. CPR-Health Care Provider is a prerequisite for the program.

Pharmacy technicians assist and support licensed pharmacists in providing direct patient care and medications to patients. Pharmacy technicians must work under the direction of a licensed pharmacist. Employers include pharmacies based in hospitals, retail settings, home health care, nursing homes, clinics, nuclear medicine settings, and mail order prescription companies. Nontraditional employers for pharmacy technicians include medical insurance companies, medical computer software companies, drug manufacturing companies, drug wholesale companies, and food processing companies. The one requirement these pharmacy technician duties have in common is a need for absolute accuracy and precision in the technical and clerical aspects of this career.

Upon graduation from the program, the student is eligible to take the Pharmacy Technician Certification Board (PTCB) Pharmacy Technician Certification Exam.

Suggested Course Sequence*
Pharmacy Technology

FIRST YEAR

1 sch	Pharmacy Technician Fundamentals (PHM 1111)		4 sch	Basic Chemistry (CHE 1114)
3 sch	Pharmacy Law (PHM 1123)		4 sch	Pharmacy Math and Dosage Calculations (PHM 1314)
2 sch	Computer Applications in Pharmacy (PHM 1212)		4 sch	Pharmacology I (PHM 1424)
3 sch	Pharmacy Anatomy and Physiology (PHM 1413)		5 sch	Pharmacy Practice (PHM 1525)
3 sch	Intermediate Algebra (MAT 1233) or higher		3 sch	Social/Behavioral Science Elective
3 sch	Written Communications Elective			

20 sch

15 sch

SUMMER TERM

2 sch Pharmaceutical Compounding (PHM 1512)

4 sch Practicum I (PHM 2614)

SECOND YEAR

4 sch	Pharmacology II (PHM 2434)		3 sch	Drug Information Research (PHM 2543)
4 sch	Nonprescription Medications and Devices (PHM 2534)		4 sch	Practicum III (PHM 2634)
4 sch	Practicum II (PHM 2624)		5 sch	Pharmacy Management (PHM 2715)
3 sch	Oral Communications Elective		3 sch	Pharmacy Transition (PHM 2813)
			3 sch	Humanities/Fine Arts Elective

15 sch

18 sch

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

PIPEFITTER/STEAMFITTER

The Pipefitter/Steamfitter program includes a basic core of courses designed to prepare a student for a variety of entry-level positions in the industrial setting. This document was developed with the use of the competencies and objectives as prepared by the National Center for Construction Education and Research (NCCER), along with applicable national, state, and local codes.

Upon successful completion of a minimum of 32 semester hours of required courses, the student will be eligible to receive a certificate in pipefitting.

Suggested Course Sequence*
Pipefitter/Steamfitter

Certificate Option

FIRST YEAR

3 sch	Fundamentals of Plumbing/Pipefitting (PPV/PCT 1113)
3 sch	Tacking, Brazing, and Burning (PPV/PCT 1213)
3 sch	Blueprint Reading for Piping Trades (PPV 1313)
3 sch	Sketching (PPV/PCT 1323)
1 sch	Pressure Boilers (PPV/PCT 1411)
6 sch	Basic Fabrication for Pipefitting (PPV 1426)

_____
19 sch

2 sch	Pipe Specifications and Systems (PPV 1432)
2 sch	Rigging and Signaling (PPV/PCT 1812)
6 sch	Vocational–Technical Electives**
6 sch	Advanced Pipefitting Lab (PPV 1456)

_____
16 sch

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

**APPROVED VOCATIONAL–TECHNICAL ELECTIVES

3 sch	Piping Level/Transit (PPV/PCT 1443)
3 sch	Steel Ship Building and Marine Construction (PPV 1823)
1–3 sch	Special Project in Pipefitting [PPV 291(1–3)]
1–6 sch	Supervised Work Experience in Pipefitting [PPV 292(1–6)]
2 sch	Domestic Systems (PPV/PCT 1712)
2 sch	Plumbing Fixtures Lab (PPV/PCT 1722)
1–3 sch	Work-Based Learning I, II, III, IV, V, and VI [(WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)]

PLUMBING TECHNOLOGY

The Plumbing Technology program prepares a person for advanced placement in plumbing and related fields. Graduates of this program can take the journeyperson exam and become employed as supervisors, instructors, material expeditors, inspectors, estimators, consultants, employers, or contractors. This document was developed with the use of the competencies and objectives as prepared by the National Center for Construction Education and Research (NCCER), along with applicable national, state, and local codes.

Upon successful completion of a minimum of 32 semester hours of required courses, the student will be eligible to receive a certificate in plumbing. An associate's degree program in plumbing is also available.

Suggested Course Sequence*
Plumbing Technology

Certificate Option

FIRST YEAR

3 sch	Fundamentals of Plumbing/Pipefitting (PPV/PCT 1113)		1 sch	Pressure Boilers (PPV/PCT 1411)

3 sch Fundamentals of Plumbing/Pipefitting (PPV/PCT 1113)

3 sch Drainage and Sewer Systems (PPV/PCT 1513)

2 sch Plumbing Fixtures Lab (PPV/PCT 1722)

2 sch Backflow Cross Connection (PPV/PCT 1732)

2 sch Gas Piping (PPV/PCT 1622)

2 sch Heating Devices (PPV/PCT 1612)

2 sch Domestic Systems (PPV/PCT 1712)

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16 sch

1 sch Pressure Boilers (PPV/PCT 1411)

5 sch Vocational–Technical Electives**

3 sch Blueprint Reading for Plumbing (PPV/PCT 1333)

3 sch Piping Level/Transit (PPV/PCT 1443)

3 sch Advanced Plumbing Lab (PPV/PCT 1743)

_____

15 sch

*   Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

**APPROVED VOCATIONAL–TECHNICAL ELECTIVES

3 sch   Sketching (PPV/PCT 1323)

3 sch   Tacking, Brazing, and Burning (PPV/PCT 1213)

2 sch   Rigging and Signaling (PPV/PCT 1812)

1–3 sch   Special Project in Plumbing [PPV/PCT 191(1–3)]

1–6 sch   Supervised Work Experience in Plumbing [PPV/PCT 192(1–6)]

1–3 sch   Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)]

Suggested Course Sequence*
Plumbing Technology

Associate's Degree

FIRST YEAR

3 sch Fundamentals of Plumbing/Pipefitting (PPV/PCT 1113)

3 sch Drainage and Sewer Systems (PPV/PCT 1513)

2 sch Heating Devices (PPV/PCT 1612)

2 sch Domestic Systems (PPV/PCT 1712)

3 sch Construction Materials (DDT 1213)

3 sch Written Communications Elective

___

16 sch

1 sch Pressure Boilers (PPV/PCT 1411)

2 sch Gas Piping (PPV/PCT 1622)

2 sch Plumbing Fixtures Lab (PPV/PCT 1722)

2 sch Backflow Cross Connection (PPV/PCT 1732)

3 sch Tacking, Brazing, and Burning (PPV/PCT 1213)

3 sch Oral Communications Elective

3 sch Humanities/Fine Arts Elective

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16 sch

SECOND YEAR

3 sch Blueprint Reading for Plumbing (PCT 1333)

3 sch Sketching (PPV/PCT 1323)

3 sch Piping Level/Transit (PPV/PCT 1443)

3 sch Special Project in Plumbing [PPV/PCT 191(1–3)]

3 sch Social/Behavioral Science Elective

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15 sch

3 sch Advanced Plumbing Lab (PPV/PCT 1743)

3 sch Cost Estimating (DDT 2243)

2 sch Rigging and Signaling (PPV/PCT 1812)

3 sch Legal Environment of Business I (BAD 2413)

3 sch Vocational–Technical Elective**

3 sch Math/Science Elective

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17 sch

*   Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

**APPROVED VOCATIONAL–TECHNICAL ELECTIVES

1–3 sch   Special Project in Plumbing [PPV/PCT 191(1–3)]

1–6 sch   Supervised Work Experience in Plumbing [PPV/PCT 192(1–6)]

1–3 sch   Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)]

PRACTICAL NURSING

The Practical Nursing program prepares the individual to assist in providing general nursing care requiring basic knowledge of the biological, physical, behavioral, psychological, and sociological sciences; and of nursing procedures that do not require the skills, judgment, and knowledge required of a registered nurse. This care is performed under the direction of a registered nurse, licensed physician, or dentist.

Students that complete the program requirements, 3 semesters, as identified by the Mississippi Department of Education, will be eligible to apply for LPN licensure. The graduate of the program functions as a provider of care and a member of a profession. This curriculum references the Client Needs Categories from the Test Plan for the National Council Licensure Examination for Licensed Practical/Vocational Nurses®.

Suggested Course Sequence*
Practical Nursing

Semester I

3 sch	Body Structure and Function (PNV 1213)
6 sch	Fundamentals of Nursing (PNV 1426)
6 sch	Fundamentals of Nursing Lab/Clinical (PNV 1436)

15 sch

Semester II

4 sch	Medical/Surgical Nursing (PNV 1614)
2 sch	Medical/Surgical Nursing Clinical (PNV 1622)
4 sch	Alterations in Adult Health (PNV 1634)
2 sch	Alterations in Adult Health Clinical (PNV 1642)
4 sch	IV Therapy Concepts (PNV 1524)

16 sch

Semester III

5 sch	Maternal-Child Nursing (PNV 1715)
3 sch	Mental Health Concepts (PNV 1813)
4 sch	Nursing Transition (PNV 1914)

12 sch

*   Students who lack entry level-skills in math, English, science, and so forth will be provided related studies.

Semester I   **Clock Hours**

Prerequisites: CPR-C

	SCH	LEC	LAB	CLIN	
Body Structure and Function	3	45	0	0	
Fundamentals of Nursing	6	90	0	0	
Fundamentals of Nursing Lab/Clinical	6	0	135	67.5	
Totals	15	135	135	67.5	(337.5)

Semester II   **Clock Hours**

	SCH	LEC	LAB	CLIN	
IV Therapy Concepts	4	45	30	0	
Medical/Surgical Nursing	4	60	0	0	
Medical/Surgical Nursing Clinical	2	0	0	90	
Alterations in Adult Health	4	60	0	0	
Alterations in Adult Health Clinical	2	0	0	90	
Totals	16	165	30	180	(375)

Semester III   **Clock Hours**

	SCH	LEC	LAB	CLIN	
Maternal-Child Nursing	5	70	0	15	
Mental Health Concepts	3	40	0	15	
Nursing Transition	4	30	30	45	
Totals	12	140	30	75	(245)

Program Total Clock Hours = 957.5
Semester Hours = 43

Note: Clinical simulations in a lab environment may be used as clinical hours.

PROCESS OPERATIONS TECHNOLOGY

PROCESS OPERATIONS TECHNOLOGY
PETRO-CHEMICAL EMPHASIS

Process Operations Technology programs prepare technicians for employment in the diverse field of process operations in petroleum refineries, power generation facilities, pharmaceutical plants, chemical plants, wastewater treatment plants, food and beverage process plants, offshore oil production facilities, and a host of other industries. Individuals currently employed as process operations technicians will enhance their ability to perform their duties and increase opportunities to advance.

This curriculum leads to an Associate of Applied Science degree in Process Operations Technology. Graduates are prepared for entry-level positions at any processing facility. They will have acquired the basic technical skills in equipment and systems and have a broadened vocabulary to make the job-specific learning less difficult. They will also possess team-building skills, safety awareness, environmental awareness, communication skills, and computer skills that are critical in the workplace. They will have a working knowledge of state and federal regulations on safety and the environment. Through an internship program, students have the opportunity to work in a position related to process technology during which they will receive work-related application of their classroom training.

PROGRAM REQUIREMENTS

The standard curriculum for Process Operations Technology is based upon the review of documents, curricula guides, reference guides, state and federal regulations, input from the program advisory committee, and a writing team. The listing of tasks from these sources served as baseline data for the development of this curriculum. The task list used in this curriculum is based upon the following assumptions:

- In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction include use of appropriate tools, testing, and measuring instruments needed to accomplish certain tasks. It is also assumed that each student has received instruction to locate and use current reference materials from industry publications that present manufacturers' recommended or required specifications and procedures for doing the various tasks.

- The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system that informs all students of their progress throughout the program should be in place.

- It is recognized that individual courses will differ across the technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.

- These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of the industry.

The curriculum framework for Process Operations Technology is designed to serve as the core curriculum for approximately 75% of each course at the postsecondary level. The remaining 25% of each course is to be added at the local level based upon the needs of students and area employers. The technical program in Process Operations Technology requires a minimum of 65 semester credit hours (sch) including 15 semester credit hours of academic core courses and 3 hours of computer competency.

The curriculum is consistent with the Gulf Coast Process Technology Alliance curriculum requirement of eight core curriculum modules for program endorsement and the program recommendations promulgated by the National Science Foundation and the Center for the Advancement of Process Technology. Graduates from the program will be eligible to take the National Certified Exit Exam for Process Operation Technicians.

Suggested Course Sequence*
Process Operations Technology

FIRST YEAR

3 sch Written Communications Elective
3 sch Introduction to Process Technology (PPT 1133)
3 sch Computer Applications Elective
3 sch Safety Health, and Environment (PPT 1513)
3 sch Technical Elective

15 sch

4 sch Process Instrumentation I (PPT 1714)
3 sch Math/Science Elective
4 sch Process Technology I (Equipment) (PPT 1424)
3 sch Social/Behavioral Science Elective
4 sch Process Technology II (Systems) (PPT 1434)

18 sch

SECOND YEAR

4 sch Process Instrumentation II (PPT 2724)
3 sch Quality Concepts (PPT 2313)
4 sch Process Technology III (Operations) (PPT 1444)
3 sch Approved Elective
3 sch Oral Communications Elective

17 sch

3 sch Technical Elective
3 sch Humanities/Fine Arts Elective
3 sch Technical Communications Elective
3 sch Process Troubleshooting (PPT 2323)
3 sch Approved Elective

15 sch

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

TECHNICAL ELECTIVES

PPT 2113 Oil and Gas Production I
PPT 2123 Oil and Gas Production II
PPT 1124 Pulping and Bleaching
PPT 1214 Process Chemistry
PPT 2154 Machine Operations for Pulp and Paper Operations
PPT 2234 Power Plant and Chemical Recovery for Pulp and Paper Operations
PPT 1613 Technical Communication
PPT 292(1–6) Supervised Work Experience in Process Operations Technology
PPT 291(1–3) Special Project in Process Operations Technology
BOT 2813 Business Communications
CST 1114 Electronics for Computer Servicing

WAN 1413   Communication Hardware

WBL (1–6)   Work-Based Learning [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)]

SHEET METAL TECHNOLOGY

The Sheet Metal Technology program prepares individuals to lay out, fabricate, erect or install, and maintain items made of steel, copper, stainless steel, and aluminum using hand tools and machines such as cornice brakes, forming rolls, and squaring shears. Instruction in sheet metal work can be placed in two basic categories: (1) building trades sheet metal work and (2) precision sheet metal work.

The building trades sheet metal workers construct and install various types of ducts that are connected to form systems through which air is passed. These systems are referred to as heating, ventilating, and air-conditioning systems. They are needed in homes, stores, apartments, offices, schools, hotels, shops, airplanes, and trains. Building trades sheet metal workers make and install gutters, downspouts, blow pipes, and industrial exhaust systems, and they construct metal roofs and metal buildings.

Precision or production sheet metal workers employed in industry produce parts used in various types of products and equipment for aircraft, missiles, electronics, communications, data processing, computers, defense, military, photography, radiography, restaurants, food processing, air handling, laboratories, appliances, spaceships, shipbuilding, sign manufacturing, and transportation.

This curriculum was developed by utilizing the competencies and objectives for the sheet metal industry as established by the National Center for Construction Education and Research (NCCER).

Upon the successful completion of the minimum of 33 semester hours of required college credit, the student will be eligible for a Certificate in Sheet Metal.

Upon completion of the required 66 semester hours in the Sheet Metal Technology program, the student will be eligible for an Associate of Applied Science Degree.

Suggested Course Sequence*
Sheet Metal Technology

Certificate Option

FIRST YEAR

2 sch	Orientation and Shop Safety (SMT 1112)
2 sch	Measurement (SMT 1212)
5 sch	Methods of Layout I (SMT 1315)
4 sch	Hand Processes I (SMT 1414)
3 sch	Sheet Metal Welding (SMT 1613)

16 sch

6 sch	Methods of Layout II (SMT 1326)
4 sch	Hand Processes II (SMT 1424)
4 sch	Machine Processes I (SMT 2514)
3 sch	Technical Elective**

17 sch

* Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

**APPROVED TECHNICAL ELECTIVES

4 sch	Fundamentals of Drafting (DDT 1114)
3 sch	Descriptive Geometry (DDT 1153)
3 sch	Principles of CAD (DDT 1313)
3 sch	Cost Estimating (DDT 2243)
1–3 sch	Special Project in Sheet Metal [SMT 291(1–3)]
1–3 sch	Supervised Work Experience in Sheet Metal [SMT 292(1–3)]
1–3 sch	Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]

Suggested Course Sequence*
Sheet Metal Technology

Associate's Degree

FIRST YEAR

2 sch Orientation and Shop Safety (SMT 1112)

2 sch Measurement (SMT 1212)

5 sch Methods of Layout I (SMT 1315)

4 sch Hand Processes I (SMT 1414)

3 sch Written Communications Elective

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16 sch

6 sch Methods of Layout II (SMT 1326)

4 sch Hand Processes II (SMT 1424)

3 sch Sheet Metal Welding (SMT 1613)

3 sch Math/Science Elective

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16 sch

SECOND YEAR

4 sch Machine Processes I (SMT 2514)

3 sch Plans and Specifications I (SMT 2213)

4 sch Methods of Layout III (SMT 2324)

3 sch Technical Elective**

3 sch Oral Communications Elective

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17 sch

3 sch Plans and Specifications II (SMT 2223)

4 sch Machine Processes II (SMT 2524)

4 sch Advanced Sheet Metal Welding (SMT 2614)

3 sch Humanities/Fine Arts Elective

3 sch Social/Behavioral Science Elective

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17 sch

*   Students who lack entry-level skills in math, English, science, and so forth will be provided related studies.

**APPROVED TECHNICAL ELECTIVES

3 sch   Fundamentals of Microcomputers (CPT 1113)

4 sch   Fundamentals of Drafting (DDT 1114)

3 sch   Descriptive Geometry (DDT 1153)

3 sch   Principles of CAD (DDT 1313)

3 sch   Intermediate CAD (DDT 1323)

3 sch   Cost Estimating (DDT 2243)

1–3 sch   Special Project in Sheet Metal [SMT 291(1–3)]

1–3 sch   Supervised Work Experience in Sheet Metal [SMT 292(1–3)]

1–3 sch   Work-Based Learning I, II, III, IV, V, and VI [WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), WBL 293(1–3)]

LISTING OF COURSES

AUTOMOTIVE VEHICLES AND ACCESSORIES MARKETING OPERATIONS

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Course Name: Orientation and Safety Procedures
Course Abbreviation: AAV 1112
Classification: Vocational–Technical Core
Description: An orientation to the history of accessories marketing, job opportunities, and the physical structure of the industry. Safety procedures including OSHA and EPA regulations, proper use of hand and power tools, shop hazards, and legal responsibilities are discussed and implemented throughout this course. (2 sch: 2-hr lecture)
Prerequisite: None

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Course Name: Operational Procedures
Course Abbreviation: AAV 1126
Classification: Vocational–Technical Core
Description: Everyday operations in the auto parts business, including proper business procedures, customer service, and sales procedures (6 sch: 3-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Automotive Systems I
Course Abbreviation: AAV 1214
Classification: Vocational–Technical Core
Description: Function and identification of the power train, including engine, transmission, drive line, and axles (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Automotive Systems II
Course Abbreviation: AAV 1224
Classification: Vocational–Technical Core
Description: Function and identification of automotive systems, including brake systems, cooling systems, electrical systems, heating and air-conditioning systems, and suspension systems (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Catalog Information Systems
Course Abbreviation: AAV 1316
Classification: Vocational–Technical Core

Description: Hard copy, microfiche, and computerized catalogs. Also included are the writing of invoices, interpreting price sheets, and calculating discounts. (6 sch: 3-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Merchandising
Course Abbreviation: AAV 1322
Classification: Vocational–Technical Core
Description: General parts store layout to include merchandise displays and parts bin layout (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

<p align="center">*   *   *   *   *</p>

Course Name: Internal Operations
Course Abbreviation: AAV 1414
Classification: Vocational–Technical Core
Description: Daily operations of a parts store including shipping and receiving, stocking and storing merchandise, counter operations, and physical inventory (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: None

<p align="center">*   *   *   *   *</p>

Course Name: Internal Sales
Course Abbreviation: AAV 1424
Classification: Vocational–Technical Core
Description: Sales skills using hard copy and computerized cataloging and pricing (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: None

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)
Classification: Free Elective
Description: A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1–3 sch: 3- to 9-hr externship)
Prerequisite: Concurrent enrollment in vocational–technical program area courses

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Course Name: Supervised Work Experience in Automotive Vehicles and Accessories Marketing Operations
Course Abbreviation: AAV 192(1–6)
Classification: Vocational–Technical Core

Description: A course that is a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Automotive Vehicles and Accessories Marketing Operations

BUSINESS AND MARKETING MANAGEMENT AND RELATED TECHNOLOGY

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Course Name: Principles of Marketing
Course Abbreviation: MMT 1113
Classification: Vocational–Technical Core
Description: Study of principles and problems of marketing goods and services and methods of distribution from producer to consumer. Types, functions, and practices of wholesalers and retailers and efficient techniques in the development and expansion of markets. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Marketing Management
Course Abbreviation: MMT 1123
Classification: Vocational–Technical Core
Description: A project-based course as a continuation of MMT 1113 (3 sch: 3-hr lecture)
Prerequisite: Principles of Marketing (MMT 1113)

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Course Name: Personal Selling
Course Abbreviation: MMT 1313
Classification: Vocational–Technical Core
Description: Basic principles and techniques of professional sales and their practical application. Topics include basic elements of consumer behavior, developing selling strategies, closing and servicing a sale, and developing consumer relations. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Advertising
Course Abbreviation: MMT 1323
Classification: Vocational–Technical Core
Description: The role of advertising as a promotional tool. Topics included are product and consumer analysis, media selection, and creation of advertisements. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Merchandising Math
Course Abbreviation: MMT 1413
Classification: Vocational–Technical Elective
Description: Study of the mathematical calculations involved in the merchandising process. Fundamental principles and operations in buying, pricing, and inventory control. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Marketing Seminar or Marketing Seminar I, II, III, IV
Course Abbreviation: MMT 1753 or MMT 1711, MMT 1721, MMT 1731, MMT 1741
Classification: Vocational–Technical Elective
Description: Develops leadership skills and human relations skills necessary for success in the field of marketing management. Special programs and activities will address topics directly related to marketing careers and career development. Emphasis will be placed on developing civic, social, and business responsibilities. (3 sch: 6-hr lab or 1 sch: 2-hr lab)
Prerequisite: None

* * * * *

Course Name: Principles of Management
Course Abbreviation: MMT 2213
Classification: Vocational–Technical Core
Description: Study of the basic principles and functions of organizational management with special emphasis on planning, organizing, directing, staffing, and controlling (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Human Resource Management
Course Abbreviation: MMT 2233
Classification: Vocational–Technical Core
Description: Objectives, organization, and functions of human resource management. Emphasis is placed on selection and placement, job evaluation, training, education, safety, health, employer–employee relationships, and employee services. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Marketing Case Studies
Course Abbreviation: MMT 2243
Classification: Vocational–Technical Elective
Description: The study of effective marketing management decision making through case study analysis (3 sch: 3-hr lecture)
Prerequisite: Marketing Management (MMT 1123)

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Course Name: E-Commerce Marketing
Course Abbreviation: MMT 2313
Classification: Vocational–Technical Core
Description: This course introduces the fundamental opportunities and challenges associated with e-commerce activities. Topics include designing the user interface, Web security, electronic payment systems, promotion, and legal issues involved in creating a functioning online business. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Multimedia Presentations for Marketing
Course Abbreviation: MMT 2333
Classification: Vocational–Technical Elective
Description: Design and deliver multimedia marketing presentations through the use of appropriate multimedia software and tools. Topics include marketing design concepts and related marketing communication strategies. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Marketing Web Page Design
Course Abbreviation: MMT 2343
Classification: Vocational–Technical Elective
Description: Use creative marketing strategies, concepts, and techniques to design Web sites that will reach designated target markets. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Retail Management
Course Abbreviation: MMT 2423
Classification: Vocational–Technical Elective
Description: Study of retailing processes including functions performed, principles governing effective operation, and managerial problems resulting from current economic and social trends (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Entrepreneurship
Course Abbreviation: MMT 2513
Classification: Vocational–Technical Elective
Description: Overview of activities that are involved in planning, establishing, and managing a small business enterprise. Topics to be covered include planning, location, analysis, financing, and development of a business plan. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Event Management
Course Abbreviation: MMT 2523
Classification: Vocational–Technical Elective
Description: Design a plan for special events, trade and consumer shows, exhibitions, and conventions. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: International Marketing
Course Abbreviation: MMT 2613
Classification: Vocational–Technical Elective
Description: Provide students with an overview and understanding of international marketing. This involves an analysis of world markets, their respective consumers and environments, and the marketing management required to meet the demands of constantly changing foreign markets. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Internship in Business and Marketing Management Technology
Course Abbreviation: MMT 291(1–6)
Classification: Vocational–Technical Elective
Description: Direct application of concepts and theory of business and marketing management technology. Students will work in a marketing-related environment. (1–6 sch: 3- to18-hr externship)
Prerequisite: Permission of the instructor

Fashion Marketing Technology Courses

Course Name: Fashion Design Fundamentals
Course Abbreviation: FMT 1113
Classification: Vocational–Technical Core
Description: Examines factors influencing fashion color, line, and design. Includes applications of principles of art to clothing creation and selection. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Fashion Marketing
Course Abbreviation: FMT 1213
Classification: Vocational–Technical Core
Description: An introduction to the fashion industry including fashion terminology; nature of fashion and the creating, manufacturing, and marketing of fashion (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Product Knowledge
Course Abbreviation: FMT 1223
Classification: Vocational–Technical Elective
Description: Study of the buying and selling function with emphasis on the origin and composition of products, methods of production, quality indicators, the sale of merchandise, and the care of merchandise (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Buying
Course Abbreviation: FMT 1233
Classification: Vocational–Technical Core
Description: Study of the functions of the buyer within the retail operation including logical sequences for activities and information necessary for buying merchandise (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Textiles in Fashion
Course Abbreviation: FMT 1313
Classification: Vocational–Technical Core
Description: Examination of fibers, yarns, fabric construction, finishes, and design as applied to the selection of clothing and household fabrics (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Visual Merchandising
Course Abbreviation: FMT 2414
Classification: Vocational–Technical Core
Description: Application of fundamental principles of design, perspective, and color theory to advanced projects in merchandise presentation (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Image and Wardrobe Consulting
Course Abbreviation: FMT 2513
Classification: Vocational–Technical Core
Description: Assessing and developing an appropriate client image for individuals in a variety of occupations and careers. Emphasis on solving figure problems, makeup techniques, wardrobe coordination, and the use of modeling techniques to improve image. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Fashion Sales Direction
Course Abbreviation: FMT 2613
Classification: Vocational–Technical Elective
Description: Principles and application of retail sales promotion with emphasis on in-store activities, advertising, publicity, fashion shows, and other special events (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Internship in Fashion Marketing Technology
Course Abbreviation: FMT 2913, FMT 2923, or FMT 2936
Classification: Vocational–Technical Elective
Description: Direct application of concepts, terminology, and theory of fashion marketing. Students must be employed in a work environment in which they must solve problems as encountered in industry. (Credit is awarded at the rate of 1 sch per 3-hr externship.) (3–6 sch: 9- to 18-hr externship)
Prerequisite: None

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)
Classification: Free Elective
Description: A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor or mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1–3 sch: 3- to 9-hr externship)
Prerequisite: Concurrent enrollment in vocational–technical program area courses

FOOD PRODUCTION AND MANAGEMENT TECHNOLOGY

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Course Name: Fundamentals of Operational Procedures in Food Service
Course Abbreviation: FPV 1113
Classification: Vocational–Technical Core
Description: Operational procedures for food service personnel with emphasis on using math skills for standard weights and measures, portion control, converting recipes, production formulas, and utilizing manual and computerized applications (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Management Procedures and Recordkeeping
Course Abbreviation: FPV 1123
Classification: Vocational–Technical Core
Description: A continuation of Fundamentals of Operational Procedures in Food Service. Essentials in food service recordkeeping and managerial math (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: Fundamentals of Operational Procedures in Food Service (FPV 1113) or by permission of instructor

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Course Name: Food Service Sanitation
Course Abbreviation: FPV 1213
Classification: Vocational–Technical Core
Description: Instruction in the area of sanitation to aid in the prevention of food poisoning and foodborne diseases including the Hazard Analysis Critical Control Point (HACCP) system (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Culinary Arts I
Course Abbreviation: FPV 1315
Classification: Vocational–Technical Core
Description: Study of principles, techniques, and practices of food preparation and their effects on food products with emphasis on the performance of culinary techniques, use of equipment, and quality controls in preparing and serving meals (5 sch: 2-hr lecture, 6-hr lab)
Corequisite: Foodservice Sanitation (FPV 1213)

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Course Name: Culinary Arts II
Course Abbreviation: FPV 1326
Classification: Vocational–Technical Core
Description: A continuation of the study of principles, techniques, and practices of food preparation and their effects on food products with emphasis on the performance of culinary

techniques, use of equipment, and quality controls in preparing and serving meals (6 sch: 2-hr lecture, 8-hr lab)
Prerequisite: Culinary Arts I (FPV 1315), Food Service Sanitation (FPV 1213), or by permission of instructor

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Course Name: Front of the House
Course Abbreviation: FPV 1413
Classification: Vocational–Technical Core
Description: Management of the front of the house in order to fulfill the needs of the guest and the establishment. Emphasis is placed on the types and styles of dining service merchandising, customer service, and employee training techniques. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Purchasing and Storage
Course Abbreviation: FPV 2223
Classification: Vocational–Technical Core
Description: An introduction to selection and procurement of food and non-food materials in hospitality and related industries (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: Food Service Sanitation (FPV 1213), Fundamentals of Operational Procedures in Food Service (FPV 1113), or by permission of instructor
Corequisite: Management Procedures and Recordkeeping (FPV 1123)

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Course Name: Bakery Production and Management
Course Abbreviation: FPV 2336
Classification: Vocational–Technical Core (Associate's Degree); Vocational–Technical Elective (Vocational Certificate)
Description: Skills needed for baking and bakery merchandising. Emphasis is placed on preparation, advertising, marketing, garnishing, costing, and plating baked products. (6 sch: 2-hr lecture, 8-hr lab)
Prerequisite: Food Service Sanitation (FPV 1213), Culinary Arts I (FPV 1315), Culinary Arts II (FPV 1326), or by permission of instructor

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Course Name: Catering Management
Course Abbreviation: FPV 2515
Classification: Vocational–Technical Core (Associate's Degree); Vocational–Technical Elective (Vocational Certificate)
Description: An overview of the background of catering and banquet management. Offers options in catering styles, pricing, menu design, operational controls, computerized management programs, and marketing. (5 sch: 2-hr lecture, 6-hr lab)
Prerequisite: Food Service Sanitation (FPV 1213), Culinary Arts I (FPV 1315), Front of the House (FPV 1413), Fundamentals of Operational Procedures in Food Service (FPV 1113), and Management Procedures and Recordkeeping (FPV 1123), or by permission of instructor

Prerequisite or corequisite: Culinary Arts II (FPV 1326)

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Course Name: Menu Planning and Cost Control
Course Abbreviation: FPV 2613
Classification: Vocational–Technical Core
Description: A study of the principles of menu management and cost control with emphasis on foodservice operation and marketing design, nutritional adequacy, trends, cost analysis, and profit as they relate to menu design (3 sch: 2-hr lecture, 2-hr lab)
Corequisite: Management Procedures and Recordkeeping (FPV 1123) or by permission of the instructor

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Course Name: Nutrition
Course Abbreviation: FPV 2713
Classification: Vocational–Technical Core
Description: A study of nutrients as related to personal health, foods and food preparation, recipe or menu modification for special customer needs, and merchandising techniques associated with nutritious meals (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Food Service Management
Course Abbreviation: FPV 2813
Classification: Vocational–Technical Core (Associate's Degree); Vocational–Technical Elective (Vocational Certificate)
Description: Management duties such as recruiting, interviewing, hiring, scheduling, job evaluations, employee orientation and training, payrolls, and rating employee performance. This course explores the process by which the manager can enable his or her employees to function efficiently and effectively. These processes include incentive and benefit programs, discipline, and termination. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: Fundamentals of Operational Procedures in Food Service (FPV 1113), Management Procedures and Recordkeeping (FPV 1123), Food Service Sanitation (FPV 1213), Culinary Arts I (FPV 1315), Culinary Arts II (FPV 1326), Front of the House (FPV 1413), Purchasing and Storage (FPV 2223), Catering Management (FPV 2515), Menu Planning and Cost Control (FPV 2613), and Nutrition (FPV 2713)
Corequisite: Bakery Production and Management (FPV 2336) or by permission of the instructor

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Course Name: Supervised Work Experience in Food Production and Management Technology I
Course Abbreviation: FPV 291(1–3)
Classification: Vocational–Technical Elective
Description: A course that is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–3 sch: 3- to 9-hr externship)

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Prerequisite: Consent of instructor

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Course Name: Supervised Work Experience in Food Production and Management Technology II

Course Abbreviation: FPV 292(1–3)

Classification Vocational–Technical Elective

Description: This course is a continuation of Supervised Work Experience in Food Production and Management Technology I. It is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–3 sch: 3- to 9-hr externship)

Prerequisite: Supervised Work Experience in Food Production and Management Technology I [FPV 291(1–3)] or by consent of instructor

IRRIGATION MANAGEMENT TECHNOLOGY

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Course Name: Introduction to Irrigation
Course Abbreviation: IRM 1112
Classification: Vocational–Technical Core
Description: An introduction to irrigation practices and technologies. Includes instruction in the history of irrigation, regions of water management, and the basic components of agricultural, large turf, golf, commercial, and residential irrigation systems. (2 sch: 2-hr lecture)
Prerequisites: None

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Course Name: Residential Irrigation Design
Course Abbreviation: IRM 1123
Classification: Vocational–Technical Elective
Description: A course designed to teach students the proper techniques for designing irrigation systems to achieve an effective and efficient irrigation system (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: IRM 1143 Residential Irrigation Installation or HLT 2824 Irrigation and Lighting Systems and Installation, and college math

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Course Name: Irrigation Systems Installation I
Course Abbreviation: IRM 1144
Classification: Vocational–Technical Elective
Description: An introductory course on the installation of irrigation systems. Includes instruction in basic components, site inspections, blueprint interpretation, methods and procedures for installation, and lighting system installation. (4 sch: 2-hr lecture, 4-hr lab) (HLT 2824 may be taken in lieu of this course.)
Prerequisites: None

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Course Name: Irrigation Troubleshooting and Repair
Course Abbreviation: IRM 1223
Classification: Vocational–Technical Elective
Description: A course designed to introduce students to basic fundamental and step processes to troubleshoot existing irrigation systems (3 sch: 1-hr lecture, 4-hr lab)
Prerequisites: None

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Course Name: Irrigation Systems Installation II
Course Abbreviation: IRM 1243
Classification: Vocational–Technical Elective
Description: A continuation of IRM 1144 with emphasis on irrigation auditing and contracting procedures such as system installation, site inspection, uniform efficiency measures, and calculation of base watering schedules for a specific site (3 sch: 2-hr lecture, 2-hr lab)

Prerequisites: IRM 1144 Irrigation Systems Installation I or HLT 2824 Irrigation and Lighting Systems

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Course Name: Green Industry Cost Estimating
Course Abbreviation: IRM 2123
Classification: Vocational–Technical Core
Description: A course designed to introduce budgeting and estimating fundamentals used in the landscape and irrigation industries (3 sch: 2-hr lecture, 2-hr lab) (Also taught as HLT 2123, Green Industry Cost Estimating)
Prerequisites: None

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Course Name: Irrigation Pumps, Controls, and Relays
Course Abbreviation: IRM 2233
Classification: Vocational–Technical Core
Description: A study of the basic function, operation, and maintenance of water pumps for irrigation systems. Includes instruction in determining pump size and providing backflow protection. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Irrigation Auditing
Course Abbreviation: IRM 2312
Classification: Vocational–Technical Elective
Description: A course to prepare students to take the Irrigation Association's Certified Landscape Auditor examination. Includes instruction on site inspection, system inspection, and tune-up of irrigation systems, data collection, base water scheduling, and irrigation management practices. Students will perform an audit following approved practices. (2 sch: 1-hr lecture, 2-hr lab)
Pre/Corequisites: IRM 1144 Irrigation Systems Installation I, IRM 1123 Residential Irrigation Design, and IRM 1223 Irrigation Troubleshooting and Repair (Two years of verified experience in the irrigation industry may substitute for these courses, per Irrigation Association requirements.)

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Course Name: Special Problem in Irrigation Management Technology
Course Abbreviation: IRM 291(1–3)
Classification: Vocational–Technical Elective
Description: A course to provide students with an opportunity to utilize skills and knowledge gained in other Irrigation Management Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1–3 sch: 2- to 6-hr lab)
Prerequisites: Consent of instructor

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Course Name: Supervised Work Experience in Irrigation Management Technology
Course Abbreviation: IRM 292(1–6)
Classification: Vocational–Technical Core
Description: A course that is a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisite: Consent of instructor and completion of at least one semester of advanced course work in Irrigation Management Technology

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)
Classification: Free Elective
Description: A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. Includes regular meetings and seminars with school personnel for supplemental instruction and progress reviews. (1–3 sch: 3- to 9-hr externship)
Prerequisites: Concurrent enrollment in vocational–technical program area courses

MASSAGE THERAPY

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Course Name: CPR, First Aid, and OSHA Standards
Course Abbreviation: MGV 1111
Classification: Vocational–Technical Core
Description: This course develops the knowledge and skills necessary to provide emergency care for the injured or ill until appropriate professionals take over. (1 sch: 1-hr lecture)
Prerequisite: None

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Course Name: Introduction to Massage Therapy
Course Abbreviation: MGV 1214
Classification: Vocational–Technical Core
Description: This course teaches the student theories and principles of therapeutic massage and includes the effects, benefits, indications and contraindications, history of massage therapy, Mississippi laws and regulations pertaining to massage therapist, educational and licensing requirements, professional ethics, equipment and products, client evaluations, draping techniques, massage environment, massage therapy in a health-care system, sanitary and safety practices, therapist body mechanics, conditioning, strengthening, flexibility, and human relationship skills. (4 sch: 4-hr lecture)
Prerequisite: None

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Course Name: Massage Therapy I
Course Abbreviation: MGV 1224
Classification: Vocational–Technical Core
Description: This course examines basic skills in massage therapy for various modalities. Each modality will move into the next progressive phase enhancing the student's knowledge. (4 sch: 4-hr lecture)
Prerequisite: None

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Course Name: Massage Therapy I Lab
Course Abbreviation: MGV 1232
Classification: Vocational–Technical Core
Description: This course develops basic skills in massage therapy for various modalities in a laboratory setting. Each modality will move into the next progressive phase enhancing the student's knowledge. (2 sch: 4-hr lab)
Prerequisite: None

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Course Name: Massage Therapy II
Course Abbreviation: MGV 1244
Classification: Vocational–Technical Core

Description: Students will develop basic skills in massage therapy. Each modality will move into the next progressive phase enhancing the student's knowledge. (4 sch: 4-hr lecture)
Prerequisite: All first semester courses

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Course Name: Massage Therapy II Lab
Course Abbreviation: MGV 1253
Classification: Vocational–Technical Core
Description: Students will develop basic skills in massage therapy in a laboratory setting. Each modality will move into the next progressive phase enhancing the student's knowledge. (3 sch: 6-hr lab)
Prerequisite: All first semester courses

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Course Name: Massage Therapy Clinical Lab II
Course Abbreviation: MGV 1263
Classification: Vocational–Technical Core
Description: This course applies the principles and theories of Introduction to Massage Therapy and Massage Therapy I and builds on the principles and theories taught in Massage Therapy II and is a continuation of Massage Therapy Clinical Lab I. (3 sch: 6-hr lab)
Prerequisite: All first semester courses

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Course Name: Specialized Modalities
Course Abbreviation: MGV 1272
Classification: Vocational–Technical Core
Description: Students will be introduced to several different traditions of massage and bodywork. (2 sch: 2-h lecture)
Prerequisite: All first semester courses

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Course Name: Massage Therapy Clinical Lab I
Course Abbreviation: MGV 1281
Classification: Vocational–Technical Core
Description: This course applies the principles and theories of Introduction to Massage Therapy and Massage Therapy I. (1 sch: 2-hr lab)
Prerequisite: None

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Course Name: Anatomy and Physiology for Massage Therapy
Course Abbreviation: MGV 1313
Classification: Vocational–Technical Core
Description: This is an introductory course in anatomy and physiology designed to prepare students for certification in the massage therapy program. The course topics discussed include body organization, cell structure and function, integumentary system, skeletal system and joints, muscular system, and nervous system cells. (3 sch: 3-hr lecture)

Prerequisite: None

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Course Name: Kinesiology
Course Abbreviation: MGV 1332
Classification: Vocational–Technical Core
Description: This course studies the mechanical aspects of human motion. (2 sch: 2-hr lecture)
Prerequisite: All first semester courses

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Course Name: Pathology and Medical Terminology
Course Abbreviation: MGV 1343
Classification: Vocational–Technical Core
Description: This course is designed to teach the student functional assessment of therapeutic massage in relation to pathology. The student learns pathology of multiple systems and determines its impact on the delivery of massage therapy services in his or her own practice. Discussion of the massage therapy scope of practice and its relationship to other allied health professions is included. Understanding methods of communication with other professionals and clients, exploring holistic self-care practices, and developing a systematic evaluation and documentation scheme are also covered. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Anatomy and Physiology for Massage Therapy II
Course Abbreviation: MGV 1353
Classification: Vocational–Technical Core
Description: This course is part 2 of an introductory course in anatomy and physiology designed to prepare students for certification in the massage therapy program. The course topics include sensory nervous system, the brain and brain divisions, cranial nerves, autonomic nervous system, endocrine system, reproductive system, cardiovascular system, lymphatic system, respiratory system, digestive system, and urinary system. (3 sch: 3-hr lecture)
Prerequisite: All first semester courses

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Course Name: Business and Marketing of Massage Therapy
Course Abbreviation: MGV 1511
Classification: Vocational–Technical Core
Description: This course introduces students to the various business models of massage therapy practice: independent contractor, private practice, and employee. Students will establish professional goals and develop individual plans. (1 sch: 1-hr lecture)
Prerequisite: All first semester courses

PHARMACY TECHNOLOGY

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Course Name: Pharmacy Technician Fundamentals
Course Abbreviation: PHM 1111
Classification: Vocational–Technical Core
Description: Introduces the student to the pharmacy technician career field and provides an overview of pharmacy practice and the opportunities open to certified pharmacy technicians (1 sch: 1-hr lecture)
Prerequisite: None

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Course Name: Pharmacy Law
Course Abbreviation: PHM 1123
Classification: Vocational–Technical Core
Description: Federal and state laws pertaining to the practice of pharmacy (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Computer Applications in Pharmacy
Course Abbreviation: PHM 1212
Classification: Vocational–Technical Core
Description: A comprehensive understanding of pharmacy computer systems in addition to hands-on operation (2 sch: 4-hr lab)
Prerequisite: None

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Course Name: Pharmacy Math and Dosage Calculations
Course Abbreviation: PHM 1314
Classification: Vocational–Technical Core
Description: Proper use of the metric, apothecary, and avoirdupois systems. Conversion between the systems. Application of formulas, calculations of fractional dosages, and methods of calculating dosages from all drug forms. Review of calculations dealing with ratio and proportion, percentages, ratio strength, reducing and enlarging formulas, and dilution and concentration problems. (4 sch: 4-hr lecture)
Prerequisite: Intermediate Algebra (MAT 1233) or higher

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Course Name: Pharmacy Anatomy and Physiology
Course Abbreviation: PHM 1413
Classification: Vocational–Technical Core
Description: Study of body structure essential to safe and effective pharmaceutical care (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Pharmacology I
Course Abbreviation: PHM 1424
Classification: Vocational–Technical Core
Description: A study of human disease processes and rational pharmacotherapeutics relating to fluids and nutrients in the following body systems: nervous, endocrine, skeletal, muscular, gastrointestinal, reproductive, and immune. Indications, contraindications, mechanism of action, side effects, dosages, and methods of administration including how these principles can be utilized in pharmacy practice. (4 sch: 4-hr lecture)
Prerequisite: First semester Pharmacy Technology courses

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Course Name: Pharmaceutical Compounding
Course Abbreviation: PHM 1512
Classification: Vocational–Technical Core
Description: Concepts of design, preparation, use, and evaluation of solid and semi-solid dosage forms. Specific topics include powders, tablets, capsules, coated dosage forms, suspensions, emulsions, magmas, gels, lotions, ointments, creams, pastes, suppositories, transdermal systems, sustained release products, and novel drug delivery systems. Exercises in computer application, prescription, and physician order interpretation, and the introduction of extemporaneous compounding are performed in the laboratory. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: Pharmacy Math and Dosage Calculations (PHM 1314)

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Course Name: Pharmacy Practice
Course Abbreviation: PHM 1525
Classification: Vocational–Technical Core
Description: Medication distribution systems utilized in retail and hospital pharmacy, including processing of individual prescriptions, floor stock distribution, unit dose systems, and IV admixture. Topics discussed include hazardous waste handling, infection control, principles of quality assurance, and equipment use and maintenance. Exercises in packaging, unit dose functions, aseptic compounding, parental admixture, and use of computer database systems will be performed in the laboratory. (5 sch: 3-hr lecture, 4-hr lab)
Prerequisite: First semester Pharmacy Technology courses

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Course Name: Pharmacology II
Course Abbreviation: PHM 2434
Classification: Vocational–Technical Core
Description: A study of human disease processes and rational pharmacotherapeutics relating to the cardiovascular, respiratory, renal, hematologic, and dermatologic systems as well as the eyes, ears, nose, and throat. Indications, contraindications, mechanism of action, side effects, dosages, and methods of administration including how these principles can be utilized in pharmacy practice. (4 sch: 4-hr lecture)
Prerequisite: First three semesters of Pharmacy Technology courses

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Course Name: Nonprescription Medications and Devices
Course Abbreviation: PHM 2534
Classification: Vocational–Technical Core
Description: Reviews the categories of the over-the-counter medications, explains the types and procedures of home monitoring equipment, and provides guidelines for patient counseling. Explains durable and surgical or non-durable medical products. Highlights concepts of vitamins, herbs, and nutritional supplements and the nontraditional treatment options. (4 sch: 4-hr lecture)
Prerequisite: First three semesters of Pharmacy Technology courses

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Course Name: Drug Information Research
Course Abbreviation: PHM 2543
Classification: Vocational–Technical Core
Description: The concepts of obtaining pertinent patient information and data collection including patient medical records, patient interviews, drug use reviews, literature resources, and problem solving (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: First three semesters of Pharmacy Technology courses

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Course Name: Practicum I
Course Abbreviation: PHM 2614
Classification: Vocational–Technical Core
Description: Application of pharmacist technician concepts in community and hospital pharmacy, home health, and extended care settings. The student will be placed in a community or institutional setting as the setting is available. Emphasis is placed on functions associated with medication distribution systems. (4 sch: 12-hr clinical)
Prerequisite: Second semester Pharmacy Technology courses

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Course Name: Practicum II
Course Abbreviation: PHM 2624
Classification: Vocational–Technical Core
Description: Progression of internship rotations in community hospitals, medical centers, or pharmaceutical manufacturers. The student will be placed in the setting not used in Practicum I. Emphasis is placed on intravenous admixture preparations, total parenteral nutrition, chemotherapy preparations, and the use of controlled and investigational drugs in an institution. (4 sch: 12-hr clinical)
Prerequisite: First three semesters of Pharmacy Technology courses

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Course Name: Practicum III
Course Abbreviation: PHM 2634
Classification: Vocational–Technical Core

Description: Advanced progression of internship rotations in community hospitals, medical centers, or pharmaceutical manufacturers. Emphasis is placed on intravenous admixture preparations, total parenteral nutrition, chemotherapy preparations, and the use of controlled and investigational drugs in an institution. (4 sch: 12-hr clinical)
Prerequisite: First three semesters of Pharmacy Technology courses

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Course Name: Pharmacy Management
Course Abbreviation: PHM 2715
Classification: Vocational–Technical Core
Description: Discussion of pharmacy functions relating to policies and procedures, pharmaceutical purchasing, inventory control, drug recall and returns, and maintaining transaction records. The class explores several retail functions such as payments, billing, oral and written communications, computer data collection, and pharmaceutical merchandising. (5 sch: 4-hr lecture, 2-hr lab)
Prerequisite: First four semesters of Pharmacy Technology courses

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Course Name: Pharmacy Transition
Course Abbreviation: PHM 2813
Classification: Vocational–Technical Core
Description: Further develops decision-making skills and promotes an interest in continued professional development. Employment opportunities and responsibilities, as well as preparation for the Pharmacy Technician Certification Exam, are emphasized. (3 sch: 3-hr lecture)
Prerequisite: First four semesters of Pharmacy Technology courses

PIPEFITTER/STEAMFITTER

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Course Name: Fundamentals of Plumbing/Pipefitter
Course Abbreviation: PPV/PCT 1113
Classification: Vocational–Technical Core (Plumbing and Pipefitting)
Description: Job safety and health, including first aid. Also, occupational hazards and the scope of the OSHA law. Includes pipefitting and plumbing fittings, valves, hangers, and general trade fitting identification. Included are screwed, welded, flanged, soldered, brazed, glued, compression, and flared fittings. Identification and use of pipefitting and plumbing tools used in today's piping industry. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Tacking, Brazing, and Burning
Course Abbreviation: PPV/PCT 1213
Classification: AOC Core (Plumbing Associate's Degree and Pipefitting) and Vocational–Technical Elective (Plumbing Certificate)
Description: Striking an arc, tacking metal together, setting up an oxyacetylene torch and burning, brazing and soldering, and cutting straight and bevel angles on flat steel and pipe. Safety procedures will be covered and emphasized. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Blueprint Reading for Piping Trades
Course Abbreviation: PPV 1313
Classification: Vocational–Technical Core (Pipefitting)
Description: An in-depth understanding of blueprint reading related to pipefitting (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Sketching
Course Abbreviation: PPV/PCT 1323
Classification: AOC Core (Plumbing Associate's Degree and Pipefitting) and Vocational–Technical Elective (Plumbing Certificate)
Description: Sketching, measuring, and recording required information to supplement oral descriptions and organize ideas to include individual piping components (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Pressure Boilers
Course Abbreviation: PPV/PCT 1411
Classification: Vocational–Technical Core (Pipefitting and Plumbing)

Description: Introduction to safe operation of pressure boilers for heating, steam production, and water heating (1 sch: 2-hr lab)
Prerequisite: None

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Course Name: Basic Fabrication for Pipefitting
Course Abbreviation: PPV 1426
Classification: AOC Core (Pipefitting)
Description: Use of pipefitting tools and equipment, different ways of cutting and fitting pipes, methods of calculating pipe fittings, and various types of fit-ups for different types of pipe (6 sch: 2-hr lecture, 8-hr lab)
Prerequisites: None

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Course Name: Pipe Specifications and Systems
Course Abbreviation: PPV 1432
Classification: AOC Core (Pipefitting)
Description: Different metals used in making pipe; their sizes, weights, and strengths; and how they are manufactured. The pipe systems on ships and industrial plants are studied. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Piping Level/Transit
Course Abbreviation: PPV/PCT 1443
Classification: AOC Core (Plumbing) and Vocational–Technical Elective (Pipefitting Certificate)
Description: Applications of the leveling instruments, shooting elevations, and grading pipes (3 sch: 1-hr lecture, 4-hr lab)
Prerequisites: None

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Course Name: Advanced Pipefitting Lab
Course Abbreviation: PPV 1456
Classification: AOC Core (Pipefitting)
Description: Advanced pipefitting layout, fabrication, and testing of piping systems (6 sch: 2-hr lecture, 8-hr lab)
Prerequisites: None

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Course Name: Domestic Systems
Course Abbreviation: PPV/PCT 1712
Classification: AOC Core (Plumbing) and Vocational–Technical Elective (Pipefitting)
Description: Information on the installation of a hot water system according to the unit fixture system. Also information on sizing and installation of a potable cold water system. (2 sch: 4-hr lab)

Prerequisites: None

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Course Name: Plumbing Fixtures Lab
Course Abbreviation: PPV/PCT 1722
Classification: AOC Core (Plumbing) and Vocational–Technical Elective (Pipefitting)
Description: Information on the installation of the rough-in and finish fixtures used in the plumbing construction according to International Plumbing Code (2 sch: 4-hr lab)
Prerequisites: None

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Course Name: Rigging and Signaling
Course Abbreviation: PPV/PCT 1812
Classification: AOC Core (Plumbing Associate's Degree and Pipefitting) and Vocational–Technical Elective (Plumbing Certificate)
Description: Basic use of hand signals, rigging, and equipment (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Steel Ship Building and Marine Construction
Course Abbreviation: PPV 1823
Classification: Vocational–Technical Elective (Pipefitting)
Description: Structure of a ship and abbreviation of parts and sections of ships. Also, various types of piping systems, including both building and marine pipefitting systems. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Special Project in Pipefitting
Course Abbreviation: PPV 291(1–3)
Classification: Vocational–Technical Elective (Pipefitting)
Description: Practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–3 sch: 2- to 6-hr lab)
Prerequisites: Consent of instructor

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Course Name: Supervised Work Experience in Pipefitting
Course Abbreviation: PPV 292(1–6)
Classification: Vocational–Technical Elective (Pipefitting)
Description: A cooperative program between industry and education designed to integrate the student's studies with industrial experience. Variable credit is awarded on the basis of semester hour per 45 industrial contact hours. (1–6 sch: 3- to18-hr externship)
Prerequisites: Consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)
Classification: Free Elective
Description: A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1–3 sch: 3- to 9-hr externship)
Prerequisite: Concurrent enrollment in vocational–technical program area courses

PLUMBING TECHNOLOGY

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Course Name: Fundamentals of Plumbing/Pipefitting
Course Abbreviation: PPV/PCT 1113
Classification: Vocational–Technical Core (Plumbing and Pipefitting)
Description: Job safety and health, including first aid. Also, occupational hazards and the scope of the OSHA law. Includes pipefitting and plumbing fittings, valves, hangers, and general trade fitting identification. Included are screwed, welded, flanged, soldered, brazed, glued, compression, and flared fittings. Identification and use of pipefitting and plumbing tools used in today's piping industry. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Blueprint Reading for Plumbing
Course Abbreviation: PPV/PCT 1333
Classification: Vocational–Technical Core (Plumbing)
Description: An in-depth understanding of blueprint reading related to plumbing profession (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Pressure Boilers
Course Abbreviation: PPV/PCT 1411
Classification: Vocational–Technical Core (Pipefitting and Plumbing)
Description: Introduction to safe operation of pressure boilers for heating, steam production, and water heating (1 sch: 2-hr lab)
Prerequisite: None

Pipefitting Technology Courses

Course Name: Tacking, Brazing, and Burning
Course Abbreviation: PPV/PCT 1213
Classification: AOC Core (Plumbing Associate's Degree and Pipefitting) and Vocational–Technical Elective (Plumbing Certificate)
Description: Striking an arc; tacking metal together; setting up an oxyacetylene torch and burning, brazing, and soldering; and cutting straight and bevel angles on flat steel and pipe. Safety procedures will be covered and emphasized. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Sketching
Course Abbreviation: PPV/PCT 1323
Classification: AOC Core (Plumbing Associate's Degree and Pipefitting) and Vocational–Technical Elective (Plumbing Certificate)

Description: Sketching, measuring, and recording required information to supplement oral descriptions and organize ideas to include individual piping components (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Rigging and Signaling
Course Abbreviation: PPV/PCT 1812
Classification: AOC Core (Plumbing Associate's Degree and Pipefitting) and Vocational–Technical Elective (Plumbing Certificate)
Description: Basic use of hand signals, rigging, and equipment (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

Plumbing Technology Courses

Course Name: Piping Level/Transit
Course Abbreviation: PPV/PCT 1443
Classification: AOC Core (Plumbing) and Vocational–Technical Elective (Pipefitting Certificate)
Description: Applications of the leveling instruments, shooting elevations, and grading pipes (3 sch: 1-hr lecture, 4-hr lab)
Prerequisites: None

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Course Name: Drainage and Sewer Systems
Course Abbreviation: PPV/PCT 1513
Classification: AOC Core (Plumbing)
Description: Information and practical aspects of drainage and disposal systems and the International Plumbing Code. Included are the installation of the drainage system in a residential unit covering health aspects and the disposal of poisonous gases arising from the discharge of traps. Instruction is provided on elements of disposal systems, including sewer, septic tanks, tank size calculations, maintenance causes, and removal of sewer obstructions. (3 sch: 1-hr lecture, 4-hr lab)
Prerequisites: None

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Course Name: Heating Devices
Course Abbreviation: PPV/PCT 1612
Classification: AOC Core (Plumbing)
Description: Information on local codes for installing and repairing water heaters, force air units, and floor furnaces (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Gas Piping
Course Abbreviation: PPV/PCT 1622

Classification: AOC Core (Plumbing)
Description: Information on standard gas codes. The safe installation of gas appliances and gas lines, according to codes, will be included. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Domestic Systems
Course Abbreviation: PPV/PCT 1712
Classification: AOC Core (Plumbing) and Vocational–Technical Elective (Pipefitting)
Description: Information on the installation of a hot water system according to the unit fixture system. Also information on sizing and installation of a potable cold water system. (2 sch: 4-hr lab)
Prerequisites: None

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Course Name: Plumbing Fixtures Lab
Course Abbreviation: PPV/PCT 1722
Classification: AOC Core (Plumbing) and Vocational–Technical Elective (Pipefitting)
Description: Information on the installation of the rough-in and finish fixtures used in the plumbing construction according to International Plumbing Code (2 sch: 4-hr lab)
Prerequisites: None

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Course Name: Backflow Cross Connection
Course Abbreviation: PPV/PCT 1732
Classification: AOC Core (Plumbing)
Description: Information on the different types of backflow devices and the installation and testing of the devices (2 sch: 1-hr lecture, 2-hr lab)
Prerequisites: None

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Course Name: Advanced Plumbing Lab
Course Abbreviation: PPV/PCT 1743
Classification: AOC Core (Plumbing)
Description: Additional study in the area of advanced plumbing in the commercial area (3 sch: 1-hr lecture, 4-hr lab)
Prerequisites: None

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Course Name: Special Project in Plumbing
Course Abbreviation: PPV/PCT 191(1–3)
Classification: Vocational–Technical Elective (Plumbing)
Description: Practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–3 sch: 2- to 6-hr lab)
Prerequisites: Consent of instructor

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Course Name: Supervised Work Experience in Plumbing
Course Abbreviation: PPV/PCT 192(1–6)
Classification: Vocational–Technical Elective (Plumbing)
Description: This course is a cooperative program between industry and education and is designed to integrate the student's studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisites: Consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)
Classification: Free Elective
Description: A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1–3 sch: 3- to 9-hr externship)
Prerequisite: Concurrent enrollment in vocational–technical program area courses

PRACTICAL NURSING

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Course Name: Body Structure and Function
Course Abbreviation: PNV 1213
Classification: Vocational–Technical Core
Description: This course is a study of body structure and function essential to safe and effective nursing care. Each system of the body is covered with applications to nursing. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Fundamentals of Nursing
Course Abbreviation: PNV 1426
Classification: Vocational–Technical Core
Description: This course provides the student with the basic knowledge and skills necessary to care for the individual in wellness and illness and is applicable across the life span. (6 sch: 6-hr lecture)
Pre/corequisite: This course requires concurrent registration in PNV 1436. It also requires passing grades in PNV 1426 and PNV 1436 to receive credit for these courses. If passing grades are not maintained, both courses must be repeated concurrently upon readmission.

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Course Name: Fundamentals of Nursing Lab/Clinical
Course Abbreviation: PNV 1436
Classification: Vocational–Technical Core
Description: This course provides demonstration of and supervised practice of the fundamental skills related to practical nursing. (6 sch: 9-hr lab, 4.5-hr clinical)
Corequisites: Concurrent registration in PNV 1426 is required. Passing grades in PNV 1426 and PNV 1436 are required in order to progress in the practical nursing program. If passing grades are not maintained, both courses must be repeated concurrently upon readmission.

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Course Name: IV Therapy Concepts
Course Abbreviation: PNV 1524
Classification: Vocational–Technical Core
Description: This course is designed to prepare the practical nurse to perform the expanded role of IV therapy as outlined in the Mississippi Nursing Practice Law, Rules, and Regulations. The student, upon completion of the practical nursing program and successful passage of the licensure examination, is eligible to apply for IV certification as outlined in the above mentioned rules and regulations. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisites: All first semester Practical Nursing courses

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Course Name: Medical/Surgical Nursing
Course Abbreviation: PNV 1614
Classification: Vocational–Technical Core
Description: This course provides the student with the basic nursing theory and skills to provide safe and effective care for a client experiencing an alteration in health in systems selected from the following: vascular; respiratory; sensory and integumentary; musculoskeletal; gastrointestinal; blood, lymphatic, and immunosuppressive; urinary; reproductive; endocrine; and neurological. The systems not covered in this course are taught in Alterations in Adult Health (PNV 1634). Pharmacological and nutritional therapy, as well as oncological considerations, for various disorders is included. (4 sch: 4-hr lecture)
Prerequisites: All first semester courses. Concurrent registration in PNV 1622 is required. Passing grades in PNV 1614 and PNV 1622 are required in order to progress in the practical nursing program. If passing grades are not maintained, both courses must be repeated concurrently upon readmission.

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Course Name: Medical/Surgical Nursing Clinical
Course Abbreviation: PNV 1622
Classification: Vocational–Technical Core
Description: This course includes supervised clinical experiences for application of medical/surgical theory, the development of skills, and the use of nursing process. (2 sch: 6-hr clinical)
Pre/corequisites: All first semester courses. Concurrent registration in PNV 1614 is required. It also requires passing grades in PNV 1614 and PNV 1622 in order to progress in the practical nursing program. If passing grades are not maintained, both courses must be repeated concurrently upon readmission.

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Course Name: Alterations in Adult Health
Course Abbreviation: PNV 1634
Classification: Vocational–Technical Core
Description: This course provides the student with the basic nursing theory and skills to provide safe and effective care for a client experiencing an alteration in health in systems selected from the following: vascular; respiratory; sensory and integumentary; musculoskeletal; gastrointestinal; blood, lymphatic, and immunosuppressive; urinary; reproductive; endocrine; and neurological. The systems not covered in this course are taught in Medical/Surgical Nursing (PNV 1614). Pharmacological and nutritional therapy, as well as oncological considerations, for various disorders is included. (4 sch: 4-hr lecture)
Pre/corequisites: All first semester courses. Concurrent registration in PNV 1642 is required. Passing grades in PNV 1634 and PNV 1642 are required in order to progress in the practical nursing program. If passing grades are not maintained, both courses must be repeated concurrently upon readmission.

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Course Name: Alterations in Adult Health Clinical
Course Abbreviation: PNV 1642
Classification: Vocational–Technical Core
Description: This course includes supervised clinical experiences for application of medical/surgical theory, the development of skill, and the use of nursing process. (2 sch: 6-hr clinical)
Pre/corequisites: All first semester courses. Concurrent enrollment in PNV 1634 is required. Passing grades in PNV 1634 and PNV 1642 are required in order to progress in the practical nursing program. If passing grades are not maintained, both courses must be repeated concurrently upon readmission.

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Course Name: Maternal-Child Nursing
Course Abbreviation: PNV 1715
Classification: Vocational–Technical Core
Description: This course provides the student with basic knowledge and skills to provide safe and effective care for clients and families during pregnancy, postpartum, infancy, and childhood. (5 sch: 4.7-hr lecture, 1-hr clinical)
Prerequisites: All first semester PNV courses

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Course Name: Mental Health Concepts
Course Abbreviation: PNV 1813
Classification: Vocational–Technical Core
Description: This course provides an introduction to mental health concepts. Clinical experience will provide application of learned theory. (3 sch: 2.7-hr lecture, 1-hr clinical)
Prerequisites: First semester PNV courses

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Course Name: Nursing Transition
Course Abbreviation: PNV 1914
Classification: Vocational–Technical Core
Description: Nursing Transition promotes the development of clinical decision-making skills and an interest in continued professional development. Legal aspects of nursing and employment opportunities and responsibilities as well as preparation for the National Council Licensure Examination (NCLEX-PN®) are included. (4 sch: 2-hr lecture, 2-hr lab, 3-hr clinical)
Prerequisites: All first and second semester PNV courses

PROCESS OPERATIONS TECHNOLOGY

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Course Name: Pulping and Bleaching
Course Abbreviation: PPT 1124
Classification: Vocational–Technical Elective
Description: This course provides an introduction to major pulping and bleaching processes and chemistry used. This is a lecture–laboratory class covering the basic types of laboratory techniques used in the pulp and paper industry. The main emphasis is the practical aspects of techniques, procedures, and use of equipment, calibration of equipment, and the interpretation of data. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Process Chemistry (PPT 1214), Introduction to Process Technology (PPT 1133), or conditional approval from administration

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Course Name: Introduction to Process Technology
Course Abbreviation: PPT 1133
Classification: Vocational–Technical Required Course
Description: An introduction to process operations within the process industry. Topics include technician duties, responsibilities, and expectations; plant organizations; the plant process and utility system; and the physical and mental requirements of the process technician. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Process Chemistry
Course Abbreviation: PPT 1214
Classification: Vocational–Technical Elective
Description: An introduction to general and organic chemistry as applied to the process industry. Includes instruction on matter, energy, atoms, chemical reactions, and chemical bonding. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Process Technology I (Equipment)
Course Abbreviation: PPT 1424
Classification: Vocational–Technical Core
Description: Instruction in the use of common process equipment including piping, valves, pumps, compressors, drivers, and fixed equipment such as exchangers, tanks, drums, and vessels (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Process Technology II (Systems)
Course Abbreviation: PPT 1434
Classification: Vocational–Technical Core
Description: Study of the interrelation of process equipment and process systems including related scientific principles (4 sch: 3-hr lecture, 2-hr lab)
Pre/Corequisite: Process Technology I (Equipment) (PPT 1424)

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Course Name: Process Technology III (Operations)
Course Abbreviation: PPT 1444
Classification: Vocational–Technical Core
Description: A course that combines equipment systems into operational units with an emphasis on instruction for start-up, normal operation, abnormal/emergency operations, and shutdown of an entire process (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Safety, Health, and Environment
Course Abbreviation: PPT 1513
Classification: Vocational–Technical Core
Description: Development of knowledge and skills to reinforce attitudes and behaviors required for safe and environmentally sound work habits. Emphasis is placed on safety, health, and environmental issues in the performance of all job tasks and regulatory compliance issues. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Technical Communication
Course Abbreviation: PPT 1613
Classification: Vocational–Technical Elective
Description: An application of written, oral, and other forms of communication to the process technology industry. Includes instruction and practice in written communications (reports and presentations, procedures, resumes, documentation, training materials, etc.) and oral communications (presentations, directions/instructions, feedback, etc.). (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Process Instrumentation I
Course Abbreviation: PPT 1714
Classification: Vocational–Technical Core
Description: A study of the instruments and instrument systems used in chemical processing industry including terminology, primary variables, symbols, and control loops (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Oil and Gas Production I
Course Abbreviation: PPT 2113
Classification: Vocational–Technical Elective
Description: An overview of the petroleum industry including exploration and geology, well drilling, wellhead operations, and product distribution. Emphasis is placed on oil and gas production. (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Oil and Gas Production II
Course Abbreviation: PPT 2123
Classification: Vocational–Technical Elective
Description: A continuation of Oil and Gas Production I with emphasis on oil and natural gas production and processing (3 sch: 3-hr lecture)
Prerequisite: Oil and Gas Production I (PPT 2113)

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Course Name: Machine Operations for Pulp and Paper Operations
Course Abbreviation: PPT 2154
Classification: Vocational–Technical Elective
Description: This course concentrates on the functions and capability of all critical equipment in the paper mill including stock preparation, approach flow, fourdrinier, press section, drier section, calendering, winding, and finishing operations. Primary process flows, consistency control, stock blending, stock refining, wet end chemistry, stock cleaning, approach flow systems, and the cause and effect relationships each of these has with the various papermaking parameters are discussed. Components of the machine fourdrinier and the concepts of formation, retention, drainage, and pressing are also explored. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Process Chemistry (PPT 1214) and Introduction to Process Technology (PPT 1133)

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Course Name: Power Plant and Chemical Recovery for Pulp and Paper Operations
Course Abbreviation: PPT 2234
Classification: Vocational–Technical Elective
Description: The purpose of this course is to present fundamental principles of boiler operation for both power boilers and chemical recovery boilers. Emphasis is on the basic requirements for steam production and chemical recovery. Topics explored include the basic design of water tube and fire tube boilers, the concept of heat transfer, the concepts of natural and forced circulation, air and fuel supply systems, condensate and feedwater systems, the concept of chemical recovery, evaporation and deposition, and plugging problems. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Quality Concepts
Course Abbreviation: PPT 2313
Classification: Vocational–Technical Core
Description: A course to provide an introduction to the field of quality in the process industry. Students are introduced to industry-related process concepts including operating consistency, continuous improvement, plant economics, team skills, and statistical process control (SPC). (3 sch: 3-hr lecture)
Prerequisite: None

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Course Name: Process Troubleshooting
Course Abbreviation: PPT 2323
Classification: Vocational–Technical Core
Description: A course to apply knowledge of process variables, indicators and controllers, troubleshooting tools, and troubleshooting steps to solve problems in a simple process system (3 sch: 3-hr lecture)
Prerequisite: Introduction to Process Technology (PPT 1133) and Process Instrumentation I (PPT 1714)

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Course Name: Process Instrumentation II
Course Abbreviation: PPT 2724
Classification: Vocational–Technical Core
Description: A continuation of the study of varied instruments and instrument systems used in the processing industry, including terminology, primary variables, symbols, control loops, and troubleshooting (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Process Instrumentation I (PPT 1714)

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Course Name: Special Project in Process Operations Technology
Course Abbreviation: PPT 291(1–3)
Classification: Vocational–Technical Elective
Description: A course designed to provide the student with practical application of skills and knowledge gained in other vocational–technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–3 sch: 2- to 6-hr lab)
Prerequisite: Consent of the instructor

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Course Name: Supervised Work Experience in Process Operations Technology
Course Abbreviation: PPT 292(1–6)
Classification: Vocational–Technical Elective

Description: A course that is a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisite: Consent of the instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)
Classification: Free Elective
Description: A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1–3 sch: 3- to 9-hr externship)
Prerequisite: Concurrent enrollment in vocational–technical program area courses

SHEET METAL TECHNOLOGY

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Course Name: Orientation and Shop Safety
Course Abbreviation: SMT 1112
Classification: Vocational–Technical Core
Description: An overview of the occupations in the sheet metal industry and personal and shop safety practices of the sheet metal industry (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Measurement
Course Abbreviation: SMT 1212
Classification: Vocational–Technical Core
Description: Selection and use of measuring tools and basic mathematics pertaining to the sheet metal industry (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Methods of Layout I
Course Abbreviation: SMT 1315
Classification: Vocational–Technical Core
Description: Layout and development of various sheet metal problems using the principles of parallel line and triangulation development (5 sch: 2-hr lecture, 6-hr lab)
Corequisite: Measurement (SMT 1212)

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Course Name: Methods of Layout II
Course Abbreviation: SMT 1326
Classification: Vocational–Technical Core
Description: A continuation of Methods of Layout I to include radial line layout and architectural/roofing sheet metal and specialty sheet metal (6 sch: 3-hr lecture, 6-hr lab)
Prerequisite: Methods of Layout I (SMT 1315)

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Course Name: Hand Processes I
Course Abbreviation: SMT 1414
Classification: Vocational–Technical Core
Description: Selection and use of hand tools in the sheet metal trade (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Hand Processes II
Course Abbreviation: SMT 1424
Classification: Vocational–Technical Core
Description: A continuation of Hand Processes I that includes the selection and correct and safe use of the specialty hand and power tools of the sheet metal trade (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Hand Processes I (SMT 1414)

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Course Name: Sheet Metal Welding
Course Abbreviation: SMT 1613
Classification: Vocational–Technical Core
Description: Selection and use of welding machines such as manual metal arc, gas metal arc welding (GMAW), oxyacetylene, shielded metal arc welding (SMAW), and plasma arc cutting (PAC) as used in the sheet metal trade (3 sch: 1-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Plans and Specifications I
Course Abbreviation: SMT 2213
Classification: Vocational–Technical Core (Associate's Degree)
Description: Terms and definitions used in reading blueprints and specifications. Basic sketching, drawing, and dimensioning of objects will be covered. Also, specifications of blueprints and building codes will be covered. (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: None

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Course Name: Plans and Specifications II
Course Abbreviation: SMT 2223
Classification: Vocational–Technical Core (Associate's Degree)
Description: Continuation of Plans and Specifications I with emphasis placed on reading and interpreting blueprints and performing calculations (3 sch: 2-hr lecture, 2-hr lab)
Prerequisite: Plans and Specifications I (SMT 2213)

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Course Name: Methods of Layout III
Course Abbreviation: SMT 2324
Classification: Vocational–Technical Core (Associate's Degree)
Description: A continuation of Methods of Layout II with the use of CNC cutting methods for various layout of sheet metal projects (4 sch: 1-hr lecture, 6-hr lab)
Prerequisite: Methods of Layout II (SMT 1326)

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Course Name: Machine Processes I
Course Abbreviation: SMT 2514
Classification: Vocational–Technical Core
Description: Selection and the safe use of hand- and foot-operated machines of the sheet metal trade (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: None

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Course Name: Machine Processes II
Course Abbreviation: SMT 2524
Classification: Vocational–Technical Core (Associate's Degree)
Description: A continuation of Machine Processes I that includes the use of power-operated machines of the sheet metal trade (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Machine Processes I (SMT 2514)

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Course Name: Advanced Sheet Metal Welding
Course Abbreviation: SMT 2614
Classification: Vocational–Technical Core (Associate's Degree)
Description: Advanced sheet metal welding using various welding machines, processes, and techniques (4 sch: 2-hr lecture, 4-hr lab)
Prerequisite: Sheet Metal Welding (SMT 1613)

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Course Name: Special Project in Sheet Metal
Course Abbreviation: SMT 291(1–3)
Classification: Vocational–Technical Elective
Description: Provides the student with practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1–3 sch: 2- to 6-hr lab)
Prerequisite: Consent of instructor

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Course Name: Supervised Work Experience in Sheet Metal
Course Abbreviation: SMT 292(1–3)
Classification: Vocational–Technical Elective
Description: A course that is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–3 sch: 3- to 9-hr externship)
Prerequisite: Consent of instructor

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Course Name: Work-Based Learning I, II, III, IV, V, and VI
Course Abbreviation: WBL 191(1–3), WBL 192(1–3), WBL 193(1–3), WBL 291(1–3), WBL 292(1–3), and WBL 293(1–3)
Classification: Free Elective
Description: A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews. (1–3 sch: 3- to 9-hr externship)
Prerequisite: Concurrent enrollment in vocational–technical program area courses

Appendix A: Related Academic Standards[1]

Reading

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary and paraphrase, compare and contrast, cause and effect)
R5 Evaluate and Extend Meaning (fact and opinion, predict outcomes, point of view)

Mathematics Computation

M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
M9 Algebraic Operations

Applied Mathematics

A1 Numeration (ordering, place value, scientific notation)
A2 Number Theory (ratio, proportion)
A3 Data Interpretation (graph, table, chart, diagram)
A4 Pre-Algebra and Algebra (equations, inequality)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
A8 Estimation (rounding, estimation)

Language

L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

Spelling

S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

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[1] CTB/McGraw-Hill LLC. (1994). *Tests of adult basic education, forms 7 and 8.* Monterey, CA: Author. Reproduced with permission of CTB/McGraw-Hill LLC. TABE is a registered trademark of The McGraw-Hill Companies, Inc. Copyright © 1994 by CTB/McGraw-Hill LLC. Reproduction of this material is permitted for educational purposes only.

Appendix B: 21st Century Skills[2]

CS1   Global Awareness
- Using 21st century skills to understand and address global issues
- Learning from and working collaboratively with individuals representing diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
- Promoting the study of non-English language as a tool for understanding other nations and cultures

CS2   Financial, Economic, and Business Literacy
- Knowing how to make appropriate personal economic choices
- Understanding the role of the economy and the role of business in the economy
- Applying appropriate 21st century skills to function as a productive contributor within an organizational setting
- Integrating oneself within and adapting continually to the nation's evolving economic and business environment

CS3   Civic Literacy
- Being an informed citizen to participate effectively in government
- Exercising the rights and obligations of citizenship at local, state, national, and global levels
- Understanding the local and global implications of civic decisions
- Applying 21st century skills to make intelligent choices as a citizen

CS4   Information and Communication Skills
- Information and media literacy skills: Analyzing, accessing, managing, integrating, evaluating, and creating information in a variety of forms and media; understanding the role of media in society
- Communication skills: Understanding, managing, and creating effective oral, written, and multimedia communication in a variety of forms and contexts

CS5   Thinking and Problem-Solving Skills
- Critical thinking and systems thinking: Exercising sound reasoning in understanding and making complex choices; understanding the interconnections among systems
- Problem identification, formulation, and solution: Ability to frame, analyze, and solve problems
- Creativity and intellectual curiosity: Developing, implementing, and communicating new ideas to others, staying open and responsive to new and diverse perspectives

CS6   Interpersonal and Self-Directional Skills
- Interpersonal and collaborative skills: Demonstrating teamwork and leadership, adapting to varied roles and responsibilities, working productively with others, exercising empathy, and respecting diverse perspectives
- Self-direction: Monitoring one's own understanding and learning needs, locating appropriate resources, and transferring learning from one domain to another
- Accountability and adaptability: Exercising personal responsibility and flexibility in personal, workplace, and community contexts; setting and meeting high standards and goals for oneself and others; tolerating ambiguity

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[2] *21st century skills.* (n.d.). Washington, DC: Partnership for 21st Century Skills.

- Social responsibility: Acting responsibly with the interests of the larger community in mind; demonstrating ethical behavior in personal, workplace, and community contexts